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EVALUATION STUDY OF FARM AND HOME MANAGEMENT PROGRAM IN NEW YORK STATE

ADEQUACY OF SAMPLE AND CONTROL GROUP
with
Statement of Study Design

Report No. 1

Office of Extension Studies
State Colleges of Agriculture and Home Economics
Cornell University
Ithaca, New York
May 15, 1958

SUMMARY

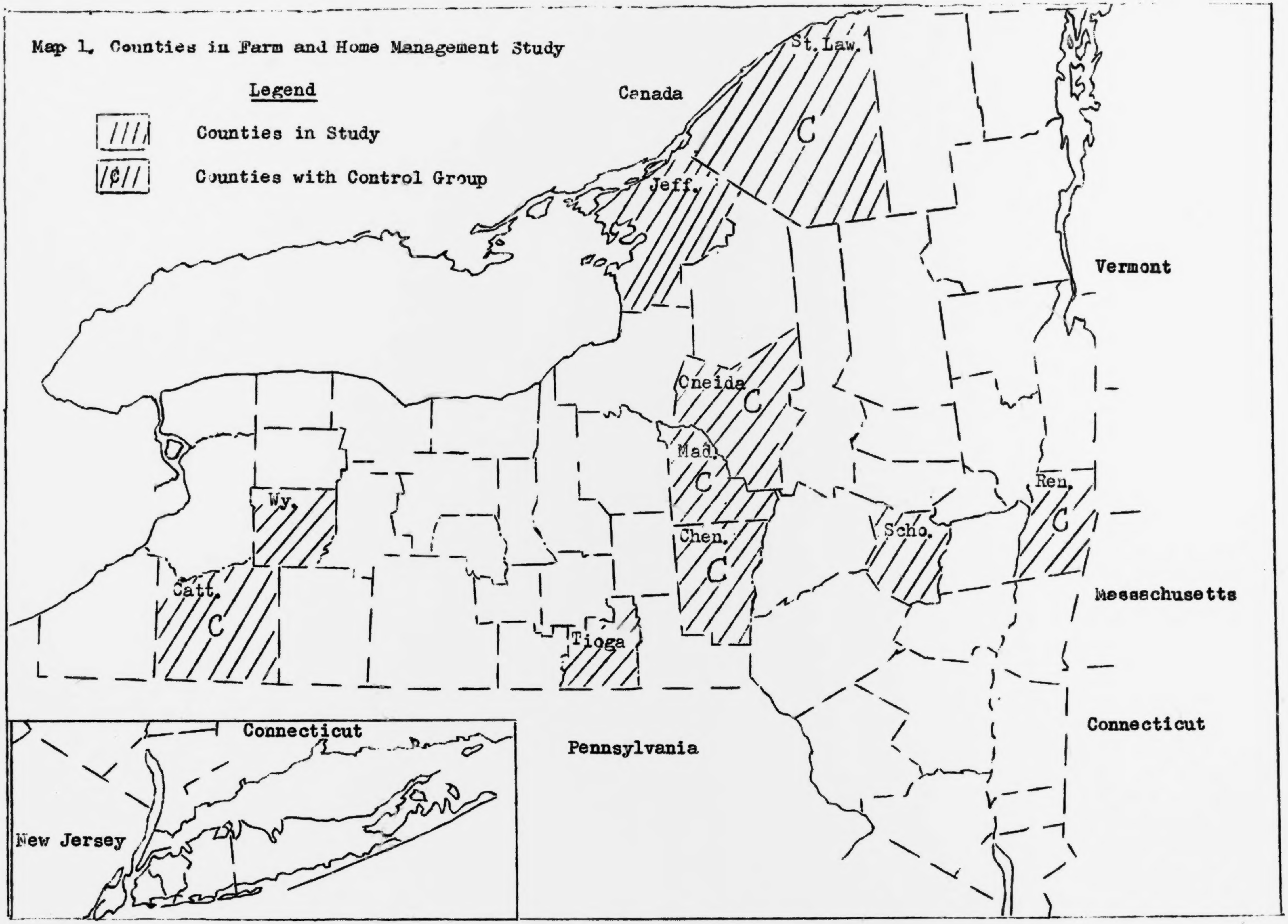
A. Comparison of sample of participants in the 10 counties included in the study with the finite universe of the participants in the 20 counties in New York State.

   1. On 7 of 8 variables, the sample of participants is very similar to the finite universe of participants.

B. Comparison of the sample of participants and the control group of nonparticipants in the 6 counties in which control was undertaken.

   1. On 7 of 8 variables used in matching, the control group of nonparticipants is well matched with sample of participants.
   2. On 22 of 29 variables in addition to those on which they were initially matched, the participants and the control group of nonparticipants are well matched.
   3. On a few variables, such as education, contact with Extension score, general participation score, and managerial ability, the participants and the nonparticipants differ significantly. These variables are important and will require special attention in subsequent efforts to measure relative change in the practices of the participants and the control group over the time-period covered by the study.

Map 1. Counties in Farm and Home Management Study


Legend
//// Counties in Study
/₵// Counties with Control Group
Canada
St. Law.
C
Jeff.
Vermont
Oneida
C
Mad.
C
Chen.
C
Wy.
Catt.
C
Tioga
Scho.
Ren.
C
Massachusetts
Connecticut
Pennsylvania
Connecticut
New Jersey

PREFACE

This report is the first in a series which will be prepared as a part of the Evaluation Study of the Farm and Home Management Program in New York State. This study is supported jointly by the Kellogg Foundation and the New York Cooperative Extension Service, with the former contributing $15,000 and the latter $18,000 per year for a five-year period.

The purposes of this report are: 1) to compare the sample of participants selected for study with the finite universe (total number) of participants in the Farm and Home Management Program at the time the study was initiated, 2) to compare the sample of participants in 6 of the 10 counties selected for study with a control group of nonparticipants in those 6 counties on the variables used for matching the control with the sample of participants, and 3) to compare this six-county sample of participants and the control group of nonparticipants on variables not used in matching these two groups, including a) selected social variables, b) scores for farm and home practices, and c) selected economic variables characterizing the farm businesses. To provide background for the report, the Introduction contains a brief description of the Farm and Home Management Program in New York State and a statement of the design of the entire evaluation study.

Many people have participated in the preparation of this report. Those who have participated in organizing the data include numerous specialists in both the College of Agriculture and the College of Home Economics. Clifton Loomis of the Department of Agricultural Economics has given considerable time to the preparation of the agricultural economic phases of the report and deserves special mention. Other specialists who have helped include: Samuel R. Aldrich, H. Joe Bearden, Clarence G. Bradt, C. Arthur Bratton, Charles M. Chance, Ruth B. Comstock, Ruth Deacon, Lola T. Dudgeon, Alvin A. Johnson, Ruby M. Loper, Dean R. Marble, Everett D. Markwardt, Samuel T. Slack, Helen P. Smith, Robert S. Smith, R. W. Spalding, and Elizabeth Wiegand.

The county agricultural agents who helped with the selection of the sample of participants, and particularly the control group of nonparticipants, deserve special mention. Without their patient and effective assistance, this study would never have been possible. These agents were: William G. Howe, Cattaraugus County; Howard W. Matott, Chenango County; Russell C. Hodnett, Jefferson County; Russell M. Cary, Madison County; Milton E. Hislop, Ralph Hadlock and James Sleight, Oneida County; Donald A. Thompson, Rensselaer County; Donald E. Huddleston and William E. Finch, St. Lawrence County; Robert E. Wingert, Schoharie County; J. Robert Gridley, Tioga County; and Jean B. Ketcham, Wyoming County.

James Longest and Jean Harshaw assisted by Jacqueline Davidson, Marilyn Spring, Sandra Hemming, Shirley Geiger, and Janet Olt of the Extension Studies Staff have carried the burden of preparing the data for tabular presentation. The typing of the report was done by Shirley Geiger and Margaret Archibald. The report was written by James Longest and Frank Alexander..

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I. INTRODUCTION

The Farm and Home Management Program in New York State

The national Farm and Home Development Program as it exists in New York State is officially designated "The Farm and Home Management Program." A policy statement prepared by a special committee concerned with Extension work in the New York State Colleges of Agriculture and Home Economics defines the program as follows:

> The objectives of the intensified farm and home management program are in line with the fundamental purposes of Extension. In general, these goals are efficient family farm businesses and satisfying farm family living. This specifically involves helping farm families: 1) To determine and use the combination of farm and home practices that best fit their needs; 2) To organize their farm and home business to utilize effectively their resources and opportunities, and to promote attainment of the goals of the farm family; 3) To attain higher levels of living and to get more satisfaction out of farm family life.
>
> Basically, this expanded program is an educational program in management and decision-making. It means an intensification, a concentration of effort, on the management and decision-making phases of farming and family living. It implies an integrated approach, a unit approach to the problems of farm families. It means more individual, on-the-farm counseling and assistance than has been available in recent years.[1]

A survey of the program in the 20 counties in the state in which the program had been initiated by April, 1956, showed the following distribution of counties according to objectives:

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[1] The Expansion of the Extension Service Program in New York State, Prepared by a committee concerned with Extension work in the New York State Colleges of Agriculture and Home Economics, pp. 4-5, August 28, 1954.

Objective	Number of Counties
1. To work with farm families on farm and home management.	10
2. To work with farm families on farm management.	7
3. To work personally with farm families on farm and home problems	1
4. To counsel with people for the purpose of increasing income, raising living standards, improving use and conservation of natural resources, and developing constructive participation in community life.	1
5. To help farmers see strong and weak points in their businesses, but initially to emphasize soil and forage management and to avoid emphasis on efficiency and dollar factors.	1

The preceding facts emphasize the extent to which the program in the spring of 1956 was concentrating on management, particularly farm management.

From the beginning of the program a college-level Steering Committee has served in an advisory capacity with specific responsibility for planning and organizing training conferences for agents whose counties are in the program. This committee consists of representatives from the Agricultural, Home Demonstration, and 4-H Departments; specialists in Farm Management, Home Management, and Extension Studies; and the Assistant Director of the Extension Service. Through its training activities the committee has given effective direction toward focusing the program on management, particularly farm management.

As of March, 1958, the Farm and Home Management Program was being conducted in 31 of the State's 56 counties which have Extension

Service programs. In all 31 counties farm management work with identifiable farm families was being carried on, and in 14 of the 31 counties home management work was also being done with the families who were involved in the farm management work.

The Design of the Evaluation Study of the Farm and Home Management Program

The study was initiated in January, 1956. At the time the study design was completed, 20 counties in the State were participating in the Farm and Home Management Program.

The design of the study was developed on the basis of: 1) an analysis of program statements prepared by the county Extension staffs in the first 15 counties entering the program, 2) a survey of programs in 20 counties (total number of counties in program at time of survey) through interviews with the agents working on the program in these counties, and 3) statistical data provided by agents on participants in the 20 counties in the program. An outline of the plan of the study follows:

A. Title of Study: Evaluation of Farm and Home Unit Approach in Extension Work in New York State.

B. Objectives:

1. To determine the relative effectiveness of the intensive county program using the farm and home unit approach and the present more extensive program.
2. To determine the relative effectiveness of various ways of doing Extension work with the farm and home unit approach.

3. To get basic input-output or cost-benefit data in order to better determine the level of intensity at which optimum return is obtained from the investment in Extension education.
4. To develop some sound procedures and techniques for use in evaluating Extension educational programs and other adult educational programs.

C. Counties Selected for Study:

1. Area approach
    a. Oneida County
2. Farm Business Management Club approach
    a. Chenango County
    b, Madison County
3. Individual family approach
    a. Cattaraugus County
    b. Jefferson County
    c. Rensselaer County
    d. St, Lawrence County
    e. Schoharie County
    f. Tioga County
    g. Wyoming County
4. Criteria for selecting counties - The 10 counties listed above (C-1, 2, and 3) were selected from the 20 counties which had entered the program by the spring of 1956. The counties were selected on the basis of the following considerations:
    a. Counties were chosen so that at least 2 would have Farm Business Management Clubs and 1 an area approach.
    b. Counties were chosen so that each would have at least 25 participants who had entered the program in either 1955 or 1956.
    c. Counties were chosen to give a reasonable distribution over the State.

d. Counties were chosen so as to have among the 10 counties a maximum number in which the home demonstration department had a program or might be expected to have one.

e. Counties were chosen so that as far as was possible the 25 participants chosen for the study would have dairying as their major enterprise.

f. Counties were chosen in which data obtained from participants in the program by means of Labor Income Blank #40 or a comparable form were available for providing benchmark production and economic information.

D. Selection of Participants and Nonparticipants (Control Group)

1. In 6 of the 10 selected counties, 25 participants were selected at random. In the remaining counties all participants were selected since at the time there were only 25 participants in these counties.

2. In 6 of the counties (Cattaraugus, Chenango, Madison, Oneida, Rensselaer, and St. Lawrence), the research staff and county agents chose a matched control group by pairing each participant family selected for study with a nonparticipant family. The matching factors were:

a. Age of operator

b. Tenure of operator

c. Partnership

d. Major farm enterprise

e. Second rank farm enterprise

f. Number of milk cows

g. Full-or part-time operator

h. Soils (general opinion of county agent)

i. Managerial ability as rated by county agent

E. Methods and Kinds of Information

1. The 250 participants and the 150 nonparticipants (control group) were interviewed in the late summer and fall of 1956 by a team of trained interviewers using a schedule for farm operators and one for homemakers. The schedules were designed to obtain the following types of information:
   a. Family information - household census including age, sex, education, occupational experience, and family background
   b. Partnership information
   c. Information on contacts with the Extension Service
   d. Experience in farm and home management program
   e. Farm and home practices
2. In addition, the Cornell Labor Income Blank #40[1] was filled out on the 150 nonparticipant farm operators. For some of the 250 participants the same or approximately the same instrument was used by county agricultural agents to obtain farm business data; for others of the 250 participants tabulations of farm business data from the operators' cash account and inventory books were obtained from the Agricultural Economics Department.

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[1] An instrument used for a number of years in the Department of Agricultural Economics to obtain data for farm business analysis and currently being used in the Farm and Home Management Program.

3. Case records on the 250 participants included in the benchmark survey are being prepared. These will include dictated accounts of agents' knowledge of and work with these families, salient facts about the families taken from the benchmark survey, and in some instances agents' contact records with the families.
4. Two annual surveys of program operations in the 10 selected counties have been made and at least a third will be conducted before the study is completed.
5. Data have been compiled for 1956 and 1957 for calculating the costs of the Farm and Home Management Program and the regular Extension program in the 10 selected counties. Analysis of these cost data on a per unit basis will be undertaken.
6. In January, 1960, a second survey, using schedules similar to those used in 1956 and the Labor Income Blank #40, will be made of the 250 participants and 150 nonparticipants, less mortalities from migration, death, going out of farming, etc.

II. COMPARISON ON SELECTED VARIABLES OF PARTICIPANTS INCLUDED IN BENCHMARK SURVEY CONDUCTED IN 10 COUNTIES WITH FINITE UNIVERSE (TOTAL) OF PARTICIPANTS IN NEW YORK STATE (20 COUNTIES) AT TIME STUDY WAS INITIATED[1]

The purpose of this section is to show how representative the sample is of the finite universe of Farm and Home Management participants at the time the study was initiated.

Summary

This comparison is made on the following selected variables:

1. When entered program
2. Tenure
3. Major farm enterprise

---

[1] It should be noted that the finite universe of participants does not include all of the families who were participating in the program when the field work for the study was initiated. The finite universe considered here was defined by the nature of the sample. Thus only those operators having 9 or more milk cows are included in the sample and hence in the universe. This definition reduced the finite universe slightly.

It is difficult to give a total figure of all participants in the program at the time the study began which might be compared to the finite universe as delimited by operators having 9 or more milk cows. A preliminary survey in the spring of 1956 showed 720 participants compared to 709 in the finite universe used in this report. The sample of 250 constitutes 35.3 per cent of the finite universe of 709 participants.

Attention is also called to the fact that for Table 5 data were available for only 19 counties of the 20 counties conducting Farm and Home Management programs at the time the study was initiated, and for Table 6 and Table 7 data were available for only 17 of the 20 counties. Thus for the variables presented in these three tables the comparison of the experimental sample with the finite universe is hardly adequate.

4. Size of herd
5. Farm receipts
6. Capital investment
7. Age of farm operator
8. Member of County Agricultural Department of County Extension Association

With the exception of the variable, when entered program, there is no significant difference between the sample of participants surveyed and the finite universe of participants on any of the variables, indicating that the sample is fairly representative of the universe.

When Entered Program

In designing the study, it was decided early that the sample of participants should be drawn from those who had entered the program after 1954. In fact it would have been desirable to have sampled only those participants who entered the program after 1955 but it was not possible to do this and have a total sample that would meet the requirements of the study. The decision to draw the sample from those who entered the program after 1954 in no small way accounts for the fact that there is a significant difference in the distribution of the sample and of the finite universe with respect to the time the participants entered the program (Table 1).

Forty-nine per cent of the participants studied entered the program in 1955 and 45 per cent in 1956. Thus approximately half of the participants studied had been exposed to the program for about a year and a half and slightly under one-half for approximately 6 months or less.

To take care of this exposure period preceding the benchmark survey, the operator's and homemaker's schedules contained a section of questions that were intended to find out the extent of exposure and resulting influence.

Table 1. Distribution of Participants Studied (10 Counties) and of Finite Universe of Participants in New York State (20 Counties) According to Dates Entered Farm and Home Management Program, 1956.

Date Entered Program	Participants (10 Cos.) (Sample)	Participants (20 Cos.) (Finite Universe)
	Per cent	
1953		
1st half	-	5
2nd half	-	-
1954		
1st half	4	7
2nd half	2	1
1955		
1st half	37	34
2nd half	12	13
1956		
1st half	42	39
2nd half	3	1
No information	-	*
Total	100	100
N =	250	709

* Value .5 per cent or less

Tenure

The finite universe of participants is predominantly (95 per cent) owners or partial owners (Table 2). This predominance of owners is also true of the sample with 98 per cent in this category.

Table 2. Tenure of Participants Studied (10 Counties) and of Finite Universe of Participants in Farm and Home Management Program in New York State (20 Counties), 1956.

Tenure of Operators	Participants (10 Cos.) (Sample)	Participants (20 Cos.) (Finite Universe)
	Per cent	
Owner or partial owner	98	95
Renter	2	5
Manager	*	-
Total	100	100
N =	250	709

* Value .5 per cent or less

$X^2 = 4.2196$ d. f. = 2 Not significant at the .05 level

The slight differences in distributions between the two groups are not significant.[1] With respect to tenure, the sample is definitely representative of the finite universe.

Major Enterprise

The finite universe of participants in the Farm and Home Management Program from which the sample of participants was taken consists predominantly of operators whose major farm enterprise is dairying (Table 3). This is also true of the sample. The 2 per cent of operators in the sample whose major enterprise is other than dairying in all cases have dairying as one of their enterprises. The homogeneity of the sample in terms of major enterprise provides an unusual opportunity to study a well-defined group of operators.

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[1] All chi squares in the report were calculated on numerical distributions.

Table 3. Farm Enterprise Ranked First According to Income Derived Therefrom of Participants Studied (10 Counties) and of Finite Universe of Participants in Farm and Home Management Program in New York State (20 Counties), 1955.

First Ranking Farm Enterprise	Participants (10 Cos.) (Sample)	Participants (20 Cos.) (Finite Universe)
	Per cent	
Dairy	98	98
Poultry	1	1
Dairy and Poultry Equal	*	*
Other	1	1
Total	100	100
N =	250	709

* Value .5 per cent or less
$X^2 = .5754$ d. f. = 3 Not significant at the .05 level

Size of Herd

The major enterprise of most of the farm operators in the sample is dairying, with a few operators having another major enterprise but combining that enterprise with dairying. Moreover, only operators having 9 or more milk cows were included in the finite universe. Table 4 gives distributions of number of milk cows for the sample and the universe of participants. There is no significant difference in the two distributions, and the averages, both means and medians, for the two groups are very similar.

Table 4. Number of Milk Cows in Herd of Participants Studied (10 Counties) and of Finite Universe of Participants in Farm and Home Management Program in New York State (20 Counties), 1955.

Number of Milk Cows	Participants (10 Cos.) (Sample)	Participants (20 Cos.) (Finite Universe)
	Per cent	
9-19	9	16
20-29	40	37
30-39	26	23
40-49	19	14
50-59	3	4
60-69	2	3
70-79	-	1
80-89	1	1
90-99	*	1
100-109	-	*
110-119	-	*
180-189	-	*
Total	100	100
N =	250	697
Mean	32.5	32.1
Median	30.1	28.5

* Value .5 per cent or less

$X^2 = 15.8149$ d.f. = 11 Not significant at the .05 level

A comparison of the average (median) size of herd of the finite universe of participants and of the sample with the average (median) size of herd for all commercial farmers in New York State shows both groups of participants have larger operations than commercial farmers with 10 or more cows [1] in the State as a whole (1954 census). The average (median) number of cows for the finite universe of participants is 28.5 and for the sample 30.1 compared to 24.2 for commercial farmers with 10 or more cows..

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[1] The finite universe of participants and the sample include only operators with 9 or more cows.

Farm Receipts

The distributions of the finite universe of participants and of the sample on farm receipts are fairly comparable (Table 5). The medians are likewise somewhat close, $19,102 for the universe and $16,867 for the sample.

This variable was also introduced at this point to show the relative position of the finite universe of participants to all commercial farmers in the State as reported in the 1954 census. The median has been used to show this relationship because it is the only average that can be calculated from census data. The census median, however, is not exactly comparable to the median for the finite universe of participants which appears in Table 5. This latter median includes receipts from the sales of products plus an increase in inventory whereas the census median includes only receipts from products sold. If the median for the finite universe of participants is corrected to exclude increase in inventory, the figure is $18,274[1] compared to $5,631 for all New York commercial farmers in 1954.

---

[1] This correction was made by calculating the median increase in inventory for the 250 farmers in the sample and subtracting the resulting figure ($828) from $19,102 (median for the universe of participants).

ERRATA

P. 14 - Paragraph 1, line 2 should read "very comparable".
Paragraph 1, line 3 should read "$16,805" and "somewhat" should be removed.
Paragraph 2, line 11 should read "$15,977".
Footnote 1, line 3 should read "$16,805".

P. 15 -- Line 2 should read "slightly below".
Table 5, median for Participants (19 Cos.) should read "16,805".

This means that the average (median) total farm receipts of the universe falls slightly above the midpoint of class II commercial farmers in New York State with total receipts ranging from $10,000-$24,999.

Table 5. Farm Receipts of Participants Studied (10 Counties) and of Finite Universe of Participants in Farm and Home Management Program in New York State (19 Counties), 1955.**

Farm Receipts ($'s)	Participants (10 Cos.) (Sample)	Participants (19 Cos.) (Finite Universe)
	Per cent	
Under 2,500	-	*
2,500-4,999	1	1
5,000-9,999	19	19
10,000-24,999	66	66
25,000 plus	14	14
Total	100	100
N =	250	595
Median	16,867	19,102

* Value .5 per cent or less

$X^2 = .7605$ d.f. = 4 Not significant at the .05 level

**Some of these data for the finite universe are for 1953 or 1954.

Capital Investment

The distributions for the finite universe of participants and the sample with respect to capital invested are not significantly different (Table 6).

Table 6. Capital Investment of Participants Studied (10 Counties) and of Finite Universe of Participants in Farm and Home Management Program in New York State (17 Counties), 1955.**

Capital Investment ($'s)	Participants (10 Cos.) (Sample)	Participants (17 Cos.) (Finite Universe)
	Per cent	
Under 10,000	-	1
10-19,999	10	11
20-29,999	29	25
30-39,999	26	25
40-49,999	16	16
50-59,999	11	10
60-69,999	4	5
70-79,999	1	2
80-89,999	1	3
90-99,999	*	1
100-109,999	-	1
110-119,999	*	*
120-129,999	1	*
130-139,999	-	*
170-179,999	*	-
180-189,999	-	*
210-219,999	-	*
Total	100	100
N =	250	574
Mean	37,959	39,929
Median	34,242	35,319

* Value .5 per cent or less
X^2 = 15,2440 d.f. = 16 Not significant at the .05 level

** Some of these data for the finite universe are for 1953 or 1954.

under $10,000 and only 1 per cent of the universe of participants fall into this category. However, approximately 6 per cent of the universe have $70,000 and over in capital investment compared to about 4 per cent of the sample.

Age of Farm Operator

The percentage distributions with respect to age of operators of the finite universe of participants and the sample are quite similar (Table 7). There is almost no difference between the means for the two groups and the same is true of the medians. The universe of participants and similarly the sample are relatively young farmers with 53 per cent of the universe and 51 per cent of the sample being under 40 years of age.

Table 7. Age of Operators in Participant Families Studied (10 Counties) and in Finite Universe of Participants in Farm and Home Management Program in New York State (17 Counties), 1956.

Age of Operators	Participants (10 Cos.) (Sample)	Participants (17 Cos.) (Finite Universe)
	Per cent	
Less than 25	3	4
25-29	12	9
30-34	17	15
35-39	19	25
40-44	17	17
45-54	23	19
55-64	8	10
65-74	1	1
75 and over	-	*
Total	100	100
N =	250	520
Mean	40.9	41.0
Median	39.8	39.4

* Value .5 per cent or less

$X^2 = 6.0060$ d.f. = 8 Not significant at the .05 level

A comparison of the ages of the finite universe of participant operators with those of all New York farm operators (1954) provides further evidence of the youth of the group participating in the Farm and Home Management Program. The median age of the universe is 39.4 years compared with 50.8 for all farmers in the State.

Member of Agricultural Department of County Extension Association

There is no significant difference between the finite universe of participants and the sample with respect to membership in the Agricultural Department of the County Extension Association (Table 8). Ninety-eight per cent of both groups are members.

Table 8. Membership in Agricultural Department of County Extension Association of Participant Operators Studied (10 Counties) and of Participant Operators in Finite Universe in Farm and Home Management Program in New York State (20 Counties), 1956.

Membership in Agricultural Department of County Extension Association	Participants (10 Cos.) (Sample)	Participants (20 Cos.) (Finite Universe)
	Per cent	
Yes	98	98
No	2	2
Total	100	100
N =	250	707
X^2 = .4785	d.f. = 1	Not significant at the .05 level

III COMPARISON OF PARTICIPANTS STUDIED IN SIX COUNTIES WITH CONTROL GROUP OF NONPARTICIPANTS IN THE SAME COUNTIES ON VARIABLES USED FOR MATCHING[1]

The purpose of this section is to show how well the control group of nonparticipants is matched with the corresponding group of participants in the 6 counties in which a control group was chosen.

Summary

The variables on which the control group of nonparticipants was matched by pairing with participants were:

1. Age of operator
2. Tenure of operator
3. Partnership
4. Major enterprise
5. Second rank enterprise

---

[1] In 4 of the 10 counties selected for study there was no matching control group of nonparticipants. It is anticipated that in a later report variables on the participants in these 4 counties will be related to variables on participants and nonparticipants (control group) in the 6 counties treated in this section. This would be for the purpose of determining whether or not the participants in these 4 counties may be added to those in the 6 counties in order to compare participants in all 10 counties with the nonparticipants (control group) in the 6 counties. Another less exacting method in determining whether or not to use participants in the 4 counties having no control group with the six-county control group for final comparative measurement of change in practices will be simply to combine the four- and six-county participants and then to ascertain whether or not there is a significant difference between this group and the control group.

It should also be pointed out that, assuming the four-county participants cannot be combined with the six-county participants for comparison with the six-county control group, it will be necessary to determine for presentation in a later report how well the six-county group of participants represent the finite universe of participants at the time the study was initiated.

6. Number of milk cows

7. Full-or part-time operator

8. Managerial ability

9. Soils of farm as judged by the county agricultural agent. No data were available for validating the matching on this variable.

The only variable among the first 8 listed (it was not possible to test variable 9) which shows a significant difference between participants and the control group of nonparticipants is managerial ability. It should be observed that county agricultural agents in matching on this variable had to depend on subjective judgments, whereas for the other variables the facts available to the agent were much more objective.

Age of Operator

The matching of the nonparticipant with the participant group on this variable is satisfactory. There is no significant difference in the distribution according to age groups of the participants and nonparticipants. (Table 9)

While the mean and median averages are fairly close for the two groups, they show the nonparticipants to be about 2 years older than the participants.

Table 9. Age of Operator in Participant and Nonparticipant Families (6 Counties), 1956.*

Age of Operator	Participants (Sample)	Nonparticipants (Control)
	Per cent	
Less than 25	2	1
25-29	9	5
30-34	15	12
35-39	20	20
40-44	17	20
45-54	25	24
55-64	11	14
65-74	1	4
75 and over	-	-
Total	100	100
N =	150	150
Mean	42	44
Median	41	43

$X^2 = 4.6500$ d.f. = 7 Not significant at the .05 level

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* The mean ages of homemakers are only slightly lower than those of operators without a significant difference between participant and nonparticipant. The mean for participant homemakers is 40 years and for nonparticipants, 42 years.

Tenure of Operator

The matching of the nonparticipants with participants on this variable is satisfactory with no significant difference indicated (Table 10). The slight difference which occurs with respect to full owners and owner-renters is to be expected, since the county agricultural agents could hardly have known for all of the nonparticipants whether or not they rented land for their farm operations.

Table 10. Tenure of Operator in Participant and Nonparticipant Families (6 Counties), 1955.

Tenure of Operator	Participants (Sample)	Nonparticipants (Control)
	Per cent	
Full owner	44	51
Owner-renter	53	45
Full tenant	3	3
Manager	-	-
Other tenure arrangement	-	1
Total	100	100
N =	150	150
X^2 = 9.6900	d.f. = 6	Not significant at the .05 level

Partnership

According to Table 11, there is no significant difference in the distribution of participants and nonparticipants with respect to partnership arrangements. The nonparticipants have a slightly higher

Table 11. Extent of Partnership Arrangements of Participants and of Nonparticipants (6 Counties), 1956.

Type of Business	Participants (Sample)	Nonparticipants (Control)
	Per cent	
Partnership	18	21
Not a partnership	82	79
Total	100	100
N =	150	150
X^2 = .4800	d.f. = 1	Not significant at the .05 level

proportion of operators who have partnership agreements. That there is any difference at all between the two groups arises from the fact that, especially in the case of some nonparticipants, it was difficult to know with certainty whether or not a partnership arrangement existed.

Major and Second Ranking Enterprise

Since the preliminary survey indicated that the participants in the Farm and Home Management Program in the spring of 1956 were predominantly dairy farmers, the design for sampling was planned so that those operators included would be principally dairy farmers and in no instance would have less than 9 milk cows. In those instances where operators who were chosen for the sample had a combination of dairy and poultry, a matching control operator with a similar combination was selected. Again in the absence of detailed information for those selected for the control group, it was not always possible to be sure how close the combination of enterprises of a control operator would match that of his opposite in the participant sample.

According to Table 12, there is no significant difference between the participants and nonparticipants with respect to major and secondary enterprises. In both the participant and nonparticipant groups, there are 2 operators whose major enterprise is poultry but each of these has dairying as a secondary enterprise.

Table 12. Classification of Participants and of Nonparticipants (6 Counties) According to Major or Major and Secondary Enterprise, 1955.

Type of Farm	Participants (Sample)	Nonparticipants (Control)
	Per cent	
Dairy (No Secondary Enterprise)	93	95
Dairy & Poultry (Secondary Enterprise)*	6	4
Poultry & Dairy (Secondary Enterprise)**	1	1
Total	100	100
N =	150	150
X^2 = .9000	d.f. = 2	Not significant at the .05 level

* A poultry enterprise was considered secondary if the gross receipts from the sale of eggs were $500 or more below those from milk and the operator had 500 or more hens.

** A dairy enterprise was considered secondary if the receipts from the sale of milk were $500 or more below those from eggs and the operator had 9 or more cows.

Number of Milk Cows

There is no significant difference in the distribution of milking herds according to size for the participants and nonparticipants (Table 13). The averages, both means and medians, for the two groups are very similar. Only 7 per cent of the participants and 9 per cent of the nonparticipants have under 20 cows. On the other hand the proportions of both groups with 50 or more cows are relatively small, 7 per cent for the participants and 11 for the nonparticipants.

Table 13. Number of Milk Cows in the Herd of Participant and Nonparticipant Operators (6 Counties), 1955.

Number of Milk Cows	Participants (Sample)	Nonparticipants (Control)
	Per cent	
9-19	7	9
20-29	39	40
30-39	29	24
40-49	18	16
50-59	5	5
60-69	1	3
70-79	-	1
80-89	1	1
90-99	-	1
Total	100	100
N =	150	150
Mean	32.7	33.3
Median	30.9	29.8

$X^2 = 4.7700$ d.f. = 8 Not significant at the .05 level

Full-or Part-Time Operator

There is no difference between the sample of participants and the nonparticipants with respect to major occupation (Table 14). The major occupation of 97 per cent of both groups is farming.

Table 14. Major Occupation of Participant and Nonparticipant Operators (6 Counties), 1956.

Major Occupation	Participants (Sample)	Nonparticipants (Control)
	Per cent	
Farm	97	97
Non-farm	3	3
Total	100	100
N =	150	150
X^2 = 1.0003	d.f. = 1	Not significant at the .05 level

Managerial Ability

In the paired matching for obtaining a control group, county agents considered the factor of managerial ability. While in many instances they may have had some fairly concrete knowledge of the managerial ability of the participant operators, their knowledge respecting this factor for operators who were considered for the nonparticipant group was considerably less. It is, therefore, not surprising that the scores on farm management practices[1] derived from data in the benchmark survey are significantly different for the two groups (Table 15). It is also quite likely that the exposure of the sample to the program had already had some effect before the benchmark survey was undertaken. As has already been indicated, the benchmark schedule contained questions the answers to which should be helpful in dealing with this presurvey exposure of the sample. In the final report on the study the comparison of the two groups on measurements of change must necessarily consider this presurvey exposure of the sample.

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[1] The items which were included in the scores on farm management practices used in this section are listed in the Appendix.

Table 15. Managerial Ability as Indicated by Farm Management Score of Participant and Nonparticipant Operators (6 Counties), 1956.

Managerial Ability	Participants (Sample)	Nonparticipants (Control)
	Per cent	
High	22	17
Medium	70	62
Low	8	21
Total	100	100
N =	150	150
X^2 = 10.7400	d.f. = 2	Significant at the .02 level

IV. COMPARISON OF PARTICIPANTS AND NONPARTICIPANTS ON: SELECTED SOCIAL VARIABLES, SCORES FOR FARM AND HOME PRACTICES, AND SELECTED ECONOMIC VARIABLES IN THE FARM BUSINESS

The purpose of this section is to determine how well matched the participants and nonparticipants are on selected variables other than those on which they were initially matched.

Selected Social Variables

Summary

The social variables used in this analysis were:

1. Education of the operators
2. Education of the homemakers
3. Participation of the operators and homemakers using:
    - a. General participation score
    - b. Contact with Extension score
4. Number of persons in biological family at home
5. Stage in family cycle
6. Residential mobility since family was established

The participant operators are significantly different from the nonparticipant operators on the variables of education, general participation score, and score for contact with Extension. On these same variables the homemakers of the two groupings are not significantly different. However, the difference in general participation of the two groups of homemakers is of sufficient magnitude to deserve attention.

With respect to size, stage in the family cycle, and mobility of families, participant and nonparticipant families are very similar.

Education of Operators

The educational level of the participant operators is significantly different from that of the nonparticipant operators. Examination of the two distributions reveals that this significant difference is caused by a larger percentage of the participants with high education and a larger percentage of nonparticipants with low education. The average (mean) participant operator has 12.4 years of schooling while the average (mean) nonparticipant has 11.4 years of schooling. (Table 16)

Table 16. Education of Operators in Participant and Nonparticipant Families (6 Counties), 1956.

Years of School Completed	Participants (Sample)	Nonparticipants (Control)
	Per cent	
5-7	1	3
8	8	18
9-11	25	30
12	35	30
13-15	21	13
16	7	3
17-18	3	3
Total	100	100
N =	148	149
Mean	12.4	11.4
Median	12.5	11.8

$X^2 = 15.2658$ d.f. = 6 Significant at the .05 level

This indicates that educational differences could be an explanatory intervening variable for some other differences that may be found between the participant and nonparticipant operators. In any event, education should often be controlled in order to check for the possible influence of level of education on differences between the two groups.

Education of the Homemakers

Unlike the operators, the distributions of the participant and nonparticipant homemakers on level of education are very similar. The slight differences are not significant. The two groups of homemakers have, on the average, a fraction of a year of schooling beyond high school with an average (mean) of 12.7 grades completed by participant and 12.4 by nonparticipant homemakers. (Table 17)

Table 17. Education of Homemakers in Participant and Nonparticipant Families (6 Counties), 1956.

Years of School Completed	Participants (Sample)	Nonparticipants (Control)
	Per cent	
5-7	1	1
8	10	9
9-11	18	22
12	28	35
13-15	32	23
16	9	7
17-18	2	3
Total	100	100
N =	149	148
Mean	12.7	12.4
Median	12.8	12.5

$X^2 = 1.5144$ d.f. = 6 Not significant at the .05 level

The educational level of homemakers is, therefore, not likely to be needed as a control for the analysis of other variables, although it may be useful in some instances.

General Participation Score of the Operators[1]

The participant and nonparticipant operators differ significantly with respect to general participation score. The mean score of the participants is 62 and that of the nonparticipants, 49. (Table 18)

Table 18. Participation Score of Operators in Participant and Nonparticipant Families (6 Counties), 1956.

Score	Participants (Sample)	Nonparticipants (Control)
	Per cent	
1-14	1	1
15-30	12	20
31-45	26	26
46-60	15	24
61-75	16	17
76-90	13	8
91-105	10	2
106-120	5	1
121-135	1	-
136-150	-	-
151 and over	1	1
Total	100	100
N =	150	150
Mean	62	49
Median	58	48

$X^2 = 24.1800$ d.f. = 10 Significant at the .01 level

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[1] The items which were included in the general participation score and contact with Extension score used in this section are listed in the Appendix.

The higher participation score of the participants (Table 18) and the higher educational level of the participants (Table 16) suggests that if educational level were controlled it might help explain the differences in level of participation between the participants and nonparticipants. For purposes of this report it is sufficient to note that these differences do exist. In a subsequent report analysis using controls of the type suggested will be undertaken.

General Participation Score of Homemakers

The difference with respect to general participation between participant and nonparticipant homemakers is not as great as between participant and nonparticipant operators (Tables 18 and 19). The

Table 19. Participation Score of Homemakers in Participant and Nonparticipant Families (6 Counties), 1956.

Score	Participants (Sample)	Nonparticipants (Control)
	Per cent	
1-14	15	27
15-30	33	32
31-45	15	17
46-60	16	8
61-75	11	10
76-90	5	1
91-105	3	3
106-120	-	1
121-135	1	1
136 and over	1	-
Total	100	100
N =	149	148
Mean	40	33
Median	33	27

$\chi^2 = 14.4000$ d.f. = 9 Not significant at the .05 level participant homemakers have a higher average score (mean) than that of the nonparticipant homemakers, but the distributions of the two groups are not significantly different (Table 19). However, in future analyses, differences which are this large may be considered important.

Contact with Extension Score of Operators

The operator's contact with Extension score excludes the activity of the participants in the Farm and Home Management Program. However, even with this exclusion the participants' scores are still enough higher than those of the nonparticipants to yield a highly significant difference (Table 20).

Table 20. Score for Contact with Extension of Operators in Participant and Nonparticipant Families (6 Counties), 1956.

Score	Participants (Sample)	Nonparticipants (Control)
	Per cent	
4	-	3
5	1	6
6	2	6
7	3	10
8	6	8
9	10	13
10	12	17
11	17	15
12	17	13
13	21	8
14	11	1
Total	100	100
N =	150	150
Mean	11.1	9.3
Median	11.4	9.7
$X^2 = 42.9000$	d.f. = 10	Significant at less than .001 level

Contact with Extension Score of Homemakers

There is no significant difference in the distributions of contact with Extension scores for the participant and nonparticipant homemakers (Table 21). Twenty-one per cent of the participant and 29 per cent of the nonparticipant homemakers have had no contact with the Home Demonstration Extension Service program. This is in contrast with both groups of operators, all of whom have had some or considerable contact with Extension (Table 20).

Table 21. Score for Contact with Extension of Homemakers in Participant and Nonparticipant Families (6 Counties), 1956.

Percentage Score	Participants (Sample)	Nonparticipants (Control)
	Per cent	
None	21	29
1-7	9	9
8-16	19	17
17-24	8	7
25-32	5	10
33-40	13	7
41-48	9	9
49-56	9	7
57-64	4	3
65-72	1	1
73-83	2	1
Total	100	100
N =	149	148
Mean	24	21
Median	18	14

$X^2 = 9.3258$ d.f. = 10 Not significant at the .05 level

Number of Persons in Biological Family at Home and Families by Stage in the Family Cycle[1]

The two distributions of number of persons in the biological families at home are not significantly different. They are, in fact, very similar. (Table 22)

Table 22. Number of Persons in Biological Family at Home in Participant and Nonparticipant Families (6 Counties), 1956.

Number of Persons	Participants (Sample)	Nonparticipants (Control)
	Per cent	
2	18	20
3	17	21
4	22	20
5	24	21
6	11	12
7	3	2
8	2	3
9 or more	3	1
Total	100	100
N =	149	149
Mean	4.3	4.0
Median	4.2	3.9

$X^2 = 1.1600$ d.f. = 7 Not significant at the .05 level

The distributions of families by stage in the family cycle are also very similar (Table 23).

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[1] System of classification of families for stage in the family cycle is that developed by W. A. Anderson, in Rural Social Participation and the Family Life Cycle: Part I Formal Participation, Memoir 314, Cornell University Agricultural Experiment Station, Ithaca, New York, January, 1953, pp. 10-12.

Table 23. Stage in the Family Cycle* of Participant and Nonparticipant Families (6 Counties), 1956.

Stage	Participants (Sample)	Nonparticipants (Control)
	Per cent	
Stage I	6	7
Stage II	34	29
Stage III	22	21
Stage IV	29	32
Stage V	9	11
Stage VI	-	-
Total	100	100
N =	142	144
$X^2 = .6600$	d.f. = 4	Not significant at the .05 level

*Stage I - Husband and wife only (wife less than 45 years of age)
Stage II - Husband and/or wife and 1 or more children less than 10 years of age
Stage III - Husband and/or wife and 1 or more children less than 10 and 1 or more children over 10 years of age
Stage IV - Husband and/or wife and 1 or more children over 10 years of age
Stage V - Husband and wife (wife 45 years of age or more and no children at home)
Stage VI - Widower or widow only, over 45 years of age, and no children at home.

The participant and nonparticipant families are, therefore, very similar in size and stage in the family cycle. Since stage in the family cycle roughly indicates composition of the families, the families are also similar in composition. These family characteristics, therefore, are not expected to be related to differences between the participants and nonparticipants on other variables, as for example the differences in social participation.

Residential Mobility

The residential mobility[1] distributions of the participant and nonparticipant families are very similar. The percentages of families in both groups who have no or low residential mobility, are relatively large. (Table 24).

Table 24. Residential Mobility since Family was Established of Participant and Nonparticipant Families (6 Counties), 1956.

Mobility	Participants (Sample)	Nonparticipants (Control)
		Per cent
Always lived in present residence	41	46
Low	34	37
Medium	14	10
High	11	7
Total	100	100
N =	142	143
x^2 = 2.1900	d. f. = 3	Not significant at the .05 level

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[1] The classifications of low, medium, and high were made by the system developed by James W. Longest in Social Change in the Marathon Community, Cortland County, New York, 1929 to 1954, Unpublished Cornell University Ph.D. Thesis, 1957, pp. 110-113.

Scores for Farm and Home Practices[1]

Summary

The scores on which the participants and nonparticipants are compared in this section are:

Operators' scores:

1. Score for farm management[2]
2. Score for dairy feeding practices
3. Score for dairy breeding practices
4. Score for dairy disease control practices
5. Score for agronomy practices for corn
6. Score for agronomy practices for oats
7. Score for agronomy practices for hay and pasture

Homemakers' scores:

1. Score for household management practices
2. Score for foods and nutrition practices
3. Score for clothing and textiles practices
4. Score for housing and design practices

The score for farm management and agronomy scores for oat practices and for hay and pasture practices are significantly higher for the participant than for the nonparticipant operators. It is probable that some of the difference in these scores is due to learning of the participants while on the program previous to the survey. Subsequent reports on the study will undertake an analysis of these differences.

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[1] The items which were included in these scores are in the Appendix of the report.

[2] The comparison of farm management scores is repeated here in greater detail than given earlier in Table 15, page 27. This variable is included in both sections as it is an essential variable in each. In part III it was included because it was one of the variables used for matching. It is also included in this section because it is one of the farm practice scores developed.

No significant difference exists between the participant and nonparticipant operators' distributions on scores for dairy feeding practices, dairy disease control practices, and agronomy corn practices.

There is no significant difference between the distributions of participant and nonparticipant homemakers on the four homemaking practice scores.

Score for Farm Management Practices of Operators

There is a significant difference between the distributions of participants and nonparticipants on farm management scores (Table 25).

Table 25. Score for Farm Management Practices of Operators in Participant and Nonparticipant Families (6 Counties), 1956.

Percentage Score	Participants (Sample)	Nonparticipants (Control)
	Per cent	
36-45	2	3
46-50	3	3
51-55	3	15
56-60	12	14
61-65	17	25
66-70	22	12
71-75	19	11
76-80	11	11
81-85	9	5
86-95	2	1
Total	100	100
N =	150	150
Mean	68	64
Median	68	64

X^2 = 23.1300 d.f. = 9 Significant at the .01 level

As mentioned earlier, it is likely that learning of some participants who had been exposed to the program previous to the survey has helped to raise the farm management scores of the participants above those of the nonparticipants. Another factor contributing to this difference was the inability of agents to know the managerial characteristics of nonparticipants well enough to match them with the participants on this variable. Analyses of the various intervening factors affecting managerial differences of the two groups will be undertaken in subsequent reports.

Score for Dairy Feeding Practices of Operators

There is no significant difference between the participant and nonparticipant distributions for dairy feeding scores. In fact the distributions are very similar. (Table 26)

Table 26. Score for Dairy Feeding Practices of Operators in Participant and Nonparticipant Families (6 Counties), 1956.

Percentage Score	Participants (Sample)	Nonparticipants (Control)
	Per cent	
31-40	2	1
41-50	9	11
51-60	37	35
61-70	36	41
71-80	14	12
81-90	2	-
Total	100	100
N =	150	150
Mean	61.3	60.7
Median	61.2	61.3

$X^2 = 4.4400$ d. f. = 5 Not significant at the .05 level

Score for Dairy Breeding Practices of Operators

There is no significant difference in the distributions of participants and nonparticipants with respect to dairy breeding practices scores. The differences that do exist are in the direction of the scores of the participants being larger than those of the nonparticipants. (Table 27)

Table 27. Score for Dairy Breeding Practices of Operators in Participant and Nonparticipant Families (6 Counties), 1956.

Percentage Score	Participants (Sample)	Nonparticipants (Control)
	Per cent	
Less than 21	-	-
21-30	-	1
31-40	1	2
41-50	2	4
51-60	7	13
61-70	16	22
71-80	21	17
81-90	30	23
91-100	23	18
Total	100	100
N =	150	150
Mean	79.2	74.5
Median	81.7	75.6

$X^2 = 9.0300$ d.f. = 7 Not significant at the .05 level

Score for Dairy Disease Control Practices of Operators

There is no significant difference in the distributions of participants and nonparticipants with respect to scores on dairy disease control practices. On the contrary, the distributions as well as averages, both mean and median, are very similar. (Table 28)

Table 28. Score for Dairy Disease Control Practices of Operators in Participant and Nonparticipant Families (6 Counties), 1956.

Percentage Score	Participants (Sample)	Nonparticipants (Control)
	Per cent	
24-32	1	-
33-40	-	-
41-48	1	-
49-56	3	5
57-64	10	10
65-72	9	16
73-80	35	35
81-88	36	26
89-96	5	7
97-100	-	1
Total	100	100
N =	150	150
Mean	77	76
Median	79	77

X^2 = 11.6700 d.f. = 8 Not significant at the .05 level

Score for Agronomy Practices for Corn of Operators

There is no significant difference between the distributions of participants and nonparticipants on agronomy practice scores for corn (Table 29).

Table 29. Score for Agronomy Practices for Corn of Operators in Participant and Nonparticipant Families (6 Counties), 1956.

Percentage Score	Participants (Sample)	Nonparticipants (Control)
	Per cent	
10-19	2	2
20-29	8	10
30-39	19	21
40-49	22	22
50-59	27	16
60-69	14	21
70-79	9	7
80-89	-	1
Total	100	100
N=	134	136
Mean	48.7	49.4
Median	47.8	46.9

$X^2 = 7.3170$ d.f. = 7 Not significant at the .05 level

Score for Agronomy Practices for Oats and for Hay and Pasture of Operators

There is a significant difference between the participants and the nonparticipants on their oat practices, and hay and pasture practices scores (Table 30 and 31). One reason for the participants having higher scores is probably the learning and adoption of practices resulting from program influences which occurred before the survey, but the determination of the degree of these influences must await more detailed analysis.

Table 30. Score for Agronomy Practices for Oats of Operators in Participant and Nonparticipant Families (6 Counties), 1956.

Percentage Score	Participants (Sample)	Nonparticipants (Control)
	Per cent	
0-9	1	-
10-19	1	2
20-29	1	3
30-39	2	13
40-49	14	20
50-59	12	12
60-69	12	16
70-79	17	10
80-89	34	22
90-100	6	2
Total	100	100
N =	128	128
Mean	69.3	59.5
Median	74.0	60.0
X^2 =24.1664	d.f. = 9	Significant at the .01 level

Table 31. Score for Agronomy Practices for Hay and Pasture of Operators in Participant and Nonparticipant Families (6 Counties), 1956.

Percentage Score	Participants (Sample)	Nonparticipants (Control)
	Per cent	
0 -9	2	1
10-19	-	2
20-29	4	5
30-39	7	20
40-49	18	22
50-59	30	25
60-69	20	14
70-79	13	7
80-89	5	3
90-100	1	1
Total	100	100
N =	149	148
Mean	55.8	49.3
Median	56.0	49.2

X^2 = 19.9287 d.f. = 9 Significant at the .02 level

Homemakers' Practices Scores

There is no significant difference in the distributions of participant and nonparticipant homemakers on the household management score, foods and nutrition score, clothing and textiles score, and housing and design score (Tables 32,33,34, and 35).

The only homemakers' score which is close to being significantly different is the one for housing and design. Furthermore, the variations in distribution on this score are not consistently higher or lower for the participants or nonparticipants, but the nonparticipants' scores tend to be somewhat larger as is indicated by their slightly larger mean and median scores. (Table 35)

Table 32. Score for Household Management Practices of Homemakers in Participant and Nonparticipant Families (6 Counties), 1956.

Percentage Score	Participants (Sample)	Nonparticipants (Control)
	Per cent	
46-50	-	-
51-55	1	1
56-60	3	5
61-65	11	7
66-70	25	19
71-75	28	33
76-80	22	23
81-85	8	12
86-90	2	-
Total	100	100
N =	149	148
Mean	72	73
Median	72	73

$X^2 = 5.1400$ d.f. = 7 Not significant at the .05 level

Table 33. Score for Foods and Nutrition Practices of Homemakers in Participant and Nonparticipant Families (6 Counties), 1956.

Percentage Score	Participants (Sample)	Nonparticipants (Control)
	Per cent	
24-32	-	1
33-40	2	2
41-48	11	8
49-56	18	25
57-64	29	27
65-72	24	20
73-80	10	13
81-88	5	2
89-96	1	2
Total	100	100
N =	149	148
Mean	62	62
Median	62	61
X^2 = 4.4200	d.f. = 8	Not significant at the .05 level

Table 34. Score for Clothing and Textiles Practices of Homemakers in Participant and Nonparticipant Families (6 Counties), 1956.

Percentage Score	Participants (Sample)	Nonparticipants (Control)
	Per cent	
1 -10	1	1
11-20	9	3
21-30	13	13
31-40	22	14
41-50	25	30
51-60	3	6
61-70	13	16
71-80	6	9
81-90	7	7
91-100	1	1
Total	100	100
N =	149	148
Mean	46.3	49.7
Median	42.9	46.7

$X^2 = 10.2168$ d.f. = 9 Not significant at the .05 level

Table 35. Score for Housing and Design Practices of Homemakers in Participant and Nonparticipant Families (6 Counties), 1956.

Percentage Score	Participants (Sample)	Nonparticipants (Control)
	Per cent	
Less than 24	1	-
24-32	3	1
33-40	5	4
41-48	6	12
49-56	29	18
57-64	17	26
65-72	21	18
73-80	13	16
81-88	5	4
89-100	-	1
Total	100	100
N =	149	148
Mean	60	61
Median	60	61

$X^2 = 14.1669$ d.f. = 9 Not significant at the .05 level

Selected Economic Variables in the Farm Business

Summary

The variables used in this section are:

1. Net farm income and labor income per operator
2. Pounds of milk sold per man and per cow
3. Man equivalent
4. Work units per man
5. Machinery and feed expense per cow
6. Average inventory
7. Acres of land operated

The variables on which there is a significant difference in the distributions of the participants and nonparticipants are net farm and labor income per operator.

None of the distributions for other variables are significantly different for participants and nonparticipants, but on the contrary are very similar. Of these other variables the only one on which there is enough difference (although not significant) to warrant notice is that of pounds of milk sold per man. The number of pounds of milk sold per man when related to income might explain some of the difference in income between participants and nonparticipants.

Net Farm Income and Labor Income per Operator

The distributions of participant and nonparticipant operators are significantly different with respect to net farm and labor incomes. Both mean and median net farm incomes and labor incomes per operator

Table 36. Net Farm Income per Operator of Participant and Non-Participant Farms (6 Counties), 1955.

Net Farm Income per Operator ($'s)	Participants (Sample)	Nonparticipants (Control)
	Per cent	
Negative 500 and over	-	2
Negative under 500	-	3
1-1000	5	9
1001-2000	10	15
2001-3000	19	23
3001-4000	19	20
4001-5000	19	11
5001-6000	10	10
6001-7000	6	3
7001-8000	7	1
8001-9000	2	2
9001-20,000	3	1
Total	100	100
N =	150	150
Mean	4,247	3,180
Median	3,894	2,913
X^2 = 23.9400	d.f. = 11	Significant at the .02 level

are somewhat higher for participants than for nonparticipants. The factors which contribute to these differences are not yet known, but future analyses will try to determine these relationships. (Tables 36 and 37)

Table 37. Labor Income per Operator of Participant and Nonparticipant Farms (6 Counties), 1955.

Labor Income per Operator ($'s)	Participants (Sample)	Nonparticipants (Control)
	Per cent	
Negative 500 and over	4	15
Negative under 500	3	9
1 -1000	13	15
1001-2000	21	23
2001-3000	19	18
3001-4000	18	9
4001-5000	11	7
5001-6000	5	1
6001-7000	3	1
7001-8000	1	1
8001-9000	1	-
9001-20,000	1	1
Total	100	100
N =	150	150
Mean	2,580	1,527
Median	2,449	1,455

X^2 = 28.4100 d. f. =11 Significant at the .01 level

Pounds of Milk Sold per Man[1] and per Cow

There is not a significant difference between the distributions of participant and nonparticipant farms for milk sold per man or per cow. However, the distributions of participant and nonparticipant farms for milk sold per man are almost significantly different. The magnitudes of the differences between the means and the medians also point in this direction. This, therefore, may be one of the factors causing the significantly greater incomes of the participants. (Tables 38 and 39)

Table 38. Pounds of Milk Sold per Man by Participant and Nonparticipant Farms (6 Counties), 1955.

Pounds of Milk Sold per Man	Participants (Sample)	Nonparticipants (Control)
	Per cent	
40,001 - 75,000	3	3
75,001 -110,000	9	14
110,001 -145,000	27	36
145,001 -180,000	30	21
180,001 -215,000	16	13
215,001 -250,000	12	6
250,001 -285,000	1	5
285,001 -320,000	2	1
320,001 -355,000	-	1
Total	100	100
N =	150	150
Mean	161,800	154,334
Median	157,727	142,359

$X^2 = 13.3500$ d.f. = 8 Not significant at the .05 level

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[1] Per man units utilizes the man equivalent measure of labor to equate the farms on labor supply in order to obtain a comparison on certain production factors.

Table 39. Pounds of Milk Sold per Cow by Participant and Nonparticipant Farms (6 Counties), 1955.

Pounds of Milk Sold per Cow	Participants (Sample)	Nonparticipants (Control)
	Per cent	
3,001 - 4,000	1	1
4,001 - 5,000	1	1
5,001 - 6,000	3	7
6,001 - 7,000	13	13
7,001 - 8,000	20	21
8,001 - 9,000	20	26
9,001 -10,000	21	16
10,001 -11,000	11	8
11,001 -12,000	9	5
12,001 -13,000	1	2
Total	100	100
N =	150	150
Mean	8,614	8,294
Median	8,622	8,283

$X^2 = 6.9600$ d.f. = 9 Not significant at the .05 level

Man Equivalent

Man equivalent is a measure of annual labor used in operating the farm. This includes unpaid family labor, hired labor, and the labor of the operator or operators, and is calculated on the basis of number of months of labor contributed from all sources divided by 12. Thus, if on a particular farm all labor months total 24, the man equivalent is 2.0.

The man equivalent distributions of the participant and nonparticipant farms are very similar (Table 40).

Table 40. Man Equivalent of Participant and Nonparticipant Farms (6 Counties), 1955.

Man Equivalent	Participants (Sample)	Nonparticipants (Control)
	Per cent	
0.1-0.9	1	-
1.0-1.4	32	34
1.5-1.9	23	21
2.0-2.4	30	30
2.5-2.9	6	8
3.0-3.4	5	4
3.5-3.9	1	1
4.0-4.4	1	1
4.5-4.9	-	-
5.0 plus	1	1
Total	100	100
N =	150	150
Mean	1.9	1.9
Median	1.8	1.9

X^2 = 1.8000 d.f. = 8 Not significant at the .05 level

Work Units per Man

"A productive man work unit is the average amount of productive work accomplished in ten hours.

"The number of productive man work units on a farm is calculated by multiplying the acres of each crop and the number of each kind of animal by units which have been calculated on the basis of the average amount of time required to handle one acre or one animal."[1]

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[1] Farm Management Handbook - Prepared by the Extension Staff of the Department of Agricultural Economics, N. Y. S. College of Agriculture, Cornell University, Ithaca, New York, A. E. 1045, November, 1956, p. 45.

There is not a significant difference in the distributions of participant and nonparticipant farms with respect to work units per man. The distributions are very similar and the mean averages are identical. (Table 41)

Table 41. Work Units per Man of Participant and Nonparticipant Farms (6 Counties), 1955.

Work Unite per Man	Participants (Sample)	Nonparticipants (Control)
	Per cent	
100-175	1	1
176-250	13	23
251-325	44	31
326-400	28	29
401-475	11	11
476-550	2	4
551-625	1	1
Totel	100	100
N =	150	150
Mean	320	320
Median	311	313

$X^2 = 9.7800$ d.f. = 6 Not significant at the .05 level

Machinery and Feed Expense per Cow, Average Inventory, and Acres of Land Operated

There is no significant difference in the distributions of feed and machinery expense per cow nor in average inventory or acres of land operated for the participant and nonparticipant farms. The participants and nonparticipants are, therefore, well matched on these size and cost factors. (Tables 42,43,44, and 45).

Table 42. Machinery Expense per Cow of Participant and Nonparticipant Farms (6 Counties), 1955.

Machinery Expense per Cow ($'s)	Participants (Sample)	Nonparticipants (Control)
	Per cent	
1 - 39	1	-
40 - 69	16	20
70 - 99	46	42
100-129	25	23
130-159	11	11
160-189	1	3
190-219	-	1
Total	100	100
N =	150	150
Mean	93.4	96.5
Median	91.3	91.8

$X^2 = 7.7400$ d.f. = 6 Not significant at the .05 level

Table 43. Feed Expense per Cow of Participant and Nonparticipant Farms (6 Counties), 1955.

Feed Expense per Cow ($'s)	Participants (Sample)	Nonparticipants (Control)
	Per cent	
1 - 30	3	3
31 - 60	17	27
61 - 90	33	22
91 -120	26	24
121-150	13	13
151-180	5	5
181-210	2	4
211-240	1	1
241-270	-	-
271-300	-	1
Total	100	100
N =	150	150
Mean	94	93
Median	89	88
X^2 = 9.0300	d.f. = 8	Not significant at the .05 level

Table 44. Average Inventory of Participant and Nonparticipant Farms (6 Counties), 1955.

Average Inventory ($'s)	Participants (Sample)	Nonparticipants (Control)
	Per cent	
9,001 - 20,000	13	15
20,001 - 30,000	27	21
30,001 - 40,000	27	28
40,001 - 50,000	18	19
50,001 - 60,000	9	7
60,001 - 70,000	3	3
70,001 - 80,000	1	4
80,001 - 90,000	1	1
90,001 -100,000	-	1
100,001-200,000	1	1
Total	100	100
N =	150	150
Mean	36,037	37,990
Median	33,659	35,001

$X^2 = 5.8200$ d.f. = 9 Not significant at the .05 level

Table 45. Acres of Land Operated in 1955 by Participant and Nonparticipant Operators (6 Counties), 1955.

Number of Acres	Participants (Sample)	Nonparticipants (Control)
	Per cent	
Less than 70	1	1
70 - 99	3	3
100-139	9	13
140-179	16	15
180-219	18	15
220-259	16	13
260-299	11	9
300-339	4	11
340-499	18	17
500 and over	4	3
Total	100	100
N =	150	150
Mean	257	254
Median	247	243

$X^2 = 6.6600$ d.f. = 9 Not significant at the .05 level

APPENDIX

Items included in the operator
and homemaker participation and
practices scores.

Participation Score of Operator and Homemaker

1. Membership in organizations
2. Attendance at meetings
3. Contributions made to organizations
4. Committees on
5. Offices held

Score for Contact with Extension of Operator

1. Number of Extension meetings on farming attended 1955-56
2. Attend any meetings in 1954-55
3. Number of visits to county agent's office 1955-56
4. Visit county agent's office 1954-55
5. Number of farm visits by county agents 1955-56
6. Any farm visits by county agents 1954-55
7. Ever conducted demonstration on farm cooperating with county agents
8. Ever attended special training meetings by Extension specialists
9. Ever attended demonstration meeting on someone's farm
10. Read County Farm and Home News
11. Ever a member of Extension
12. Held an office in Extension in 1956
13. On a commodity committee in 1956

Maximum total possible score - 14

Score for Contact with Extension of Homemaker

1. Now member of a home demonstration unit
2. Formerly member of a home demonstration unit
3. During past year, attend any lessons or project meetings
4. During past year, go to any general meetings of home demonstration unit
5. Ever been local leader
6. Ever been officer in unit
7. Ever been member of county's Home Demonstration Executive Committee
8. Ever had responsibilities for unit activity
9. During last year or two, attend any meeting by home demonstration agent to plan kitchen in church, etc.
10. During last year or two, attend any meetings by home demonstration agent to plan building or remodeling of community building
11. During last year or two, attend any meeting by home demonstration agent to discuss construction or remodeling of houses

(Continued)

12. In last year or two, telephoned home demonstration agent's office for information
13. In last year or two, gone to home demonstration agent's office for information
14. Ever a member of 4-H Club
15. Now a 4-H Club leader
16. Formerly a 4-H Club leader

Score for Farm Management Practices of Operator

1. Evaluation of size of operation
2. Evaluation of production per animal (cow)
3. Evaluation of production per acre
4. Evaluation of efficient use of machinery
5. Evaluation of efficient use of labor
6. Evaluation of efficient use of capital
7. Evaluation of efficient use of feed
8. Farm records used in farm business
9. Most important use of records kept
10. Least important farm records
11. Goal on use of dairy feed (as percent of milk receipts)
12. Estimate of cost of new tractor for one year if not operated
13. Estimate of cost of new tractor for one year if operated
14. Three year goal on number of cows per man in relation to labor efficiency
15. Three year goal on number of pounds of milk sold per man in relation to labor efficiency
16. Use of increase in inventory in figuring labor income
17. Proportion of total current market value of business that is represented by real estate
18. Proportion of all farm cash income that is represented by sales of milk
19. Individual who would be best off financially
20. Most serious thing wrong with Situation 14 farm business
21. More serious weakness in Situation 15 farm business
22. Three most important points to include in answer to Situation 16 farm business proposal

Score for Dairy Feeding Practices of Operator

1. Harvesting practices
    - a. Normal date of harvesting first cutting of hay
    - b. Maturity of hay at time of cutting
    - c. Kind of hay
    - d. Date of harvesting silage hay crop
    - e. Maturity at time of cutting hay silage
    - f. Corn silage stage of maturity at time of cutting

(Continued)

2. Hay equivalent fed
3. Pasture management
4. Are pastures clipped
5. Supplemental roughage feeding of cows on pasture
6. Supplemental pasture for cows when other pastures are short
7. Minerals cows receive in addition to those in grain mixture
8. Grain feeding for milking cows
9. Feeding calves
10. Grain feeding of heifers:
    a. Less than 1 year of age when not on pasture
    b. Less than 1 year of age when on pasture
    c. Over 1 year of age when not on pasture
    d. Over 1 year of age when on pasture
11. Supplemental roughage for heifers:
    a. Less than 1 year of age when not on pasture
    b. Less than 1 year of age when on pasture
    c. Over 1 year of age when not on pasture
    d. Over 1 year of age when on pasture
12. Age when fall heifers are allowed to go on pasture completely
13. Age when spring heifers are allowed to go on pasture completely
14. What is the average tape weight of your heifers at breeding
15. What is the average tape weight of your heifers at first freshening
16. What is the average age of your heifers at breeding
17. What is the average age of your heifers at first freshening

Score for Dairy Breeding Practices of Operator

1. What percentage of cows bred last year were bred artificially
2. What percentage of cows bred last year were bred to production pedigree (having a history) sire
3. What percentage of cows bred last year were bred to registered sires
4. Percentage of cows bred last year which required only 1 service
5. Which of the following breeding and treatment records do you keep
6. What is the average calving interval
7. Are cows turned out daily during winter
    a. For exercise
    b. To check for heat
8. How long do your cows normally remain dry
9. How long is allowed between calving and first service following calving

Score for Dairy Disease Control Practices of Operator

1. Use practice of calf-vaccination against brucellosis
2. Was herd blood-tested for brucellosis during the past year
3. Percentage of the herd treated during the year for mastitis
4. Are size stalls adequate for prevention of mastitis
5. Is ample bedding used for prevention of mastitis
6. Is strip cup used daily
7. Are teat ends dipped in disinfectant after milking
8. Are milking machines kept in proper operating order
9. How long is the milking machine on most cows

Score for Agronomy Practices for Corn of Operator

1. Average loads of manure per acre
2. Average tons of lime per acre
3. Average pounds of nutrient per acre
   a. Nitrogen
   b. Phosphorus
   c. Potash
4. Percentage of corn acreage top dressed
5. Percentage of hybrid corn acres planted with a hybrid with a comparative yield rating of
   a. 9.1 or more
   b. 8.6 to 9.0
   c. 8.0 to 8.5
   d. 7.9 or less
6. Percentage of corn acres treated for weed control

Score for Agronomy Practices for Oats of Operator

1. Average loads of manure per acre
2. Average pounds of nutrient per acre
   a. Nitrogen
   b. Phosphorus
   c. Potash
3. Percentage of total oat acreage seeded to highly recommended varieties
4. Percentage of total oat acreage seeded to a moderately recommended variety
5. Percentage of total oat acreage seeded to varieties with a low recommendation
6. Percentage of oat acres treated for weed control

Score for Agronomy Practices for Hay and Pasture of Operator

1. Percentage of acres which are seeded with a recommended or highly recommended variety of seed (alfalfa, birdsfoot trefoil, red clover)
2. Are there any new seedings
3. Average loads of manure per acre
4. Average tons of lime per acre
5. Average pounds of nutrient per acre
   a. Nitrogen
   b. Phosphorus
   c. Potash
6. Average number of years a particular mixture of legumes is left down (alfalfa alone, alfalfa and birdsfoot trefoil, red clover or other legumes, birdsfoot alone)
7. Percentage of acres of seedings as recommended for type of soil drainage

Score for Household Management Practices of Homemaker

1. How easily do you
   a. Plan meals
   b. Get meals on the table
   c. Wash dishes
   d. Gather and sort clothes for washing
   e. Get clothes dry
   f. Iron clothes
   g. Mend clothes
   h. Make beds
   i. Keep things picked up
   j. Do regular cleaning
   k. Get things in and out of kitchen cupboards
   l. Get things in and out of clothes closet
   m. Get things in and out of cleaning equipment storage
   n. Do shopping or marketing
   o. Clean up after meals and put food away
   p. Prepare eggs for market
2. Keep vacuum cleaner and its attachments stored together
3. Every-day-dishes, do you stack different kinds of dishes on top of each other
4. Do need to leave kitchen to get supplies while preparing a meal
5. Later satisfied with "on-the-spot" decisions
   a. In buying groceries
   b. In buying clothes
   c. To get involved in major jobs (cleaning, repairing, etc.)
   d. To stop work to take part in some spontaneous activity for fun
6. Have enough time to get things done you want to get done
7. Easily adjust activities when changes in demands on time call for it

(Continued)

8. Assuming cooperation from family
   a. Able to have meals ready on time
   b. Able to have ironing done when needed
   c. Able to have clothes cleaned or repaired when needed
   d. Able to have bills paid on time
   e. Able to finish jobs undertaken for others or other groups
   f. Able to keep from day to day your house as clean as you feel necessary
9. Are you worn out at the end of the day
10. Estimate of how much spent for family living last year
11. How much spent last year for
   a. Food
   b. Life insurance
   c. Medical expenses
12. What are estimates based on
13. What kinds of household records are kept

Score for Foods and Nutrition Practices of Homemaker

1. Method of shopping for food
2. Do you sometimes substitute for items on shopping list
3. How often shop for food
4. How much of staple food supplies store near where prepare food
5. Where keep utensils used in cleaning and preparing vegetables and fruits
6. Where keep utensils used in mixing cakes, making pies and cookies
7. How long cook cabbage
8. How long cook greens
9. How long cook snap beans
10. How long cook potatoes
11. When fry meats like hamburgers, what heat used
12. When cook pot roast or stew chicken, what heat used
13. What oven temperature for roast beef, chicken or turkey
14. What oven temperature for roast pork
15. Last year was freezer or locker full
16. Where is freezer located

Score for Clothing and Textiles Practices of Homemaker

1. Are clothes for family members discussed by family
2. How do you plan for new clothing
3. If plan a few or many months ahead, how do you go about it
4. Which members of family select and buy men's suits and coats
5. Which members of your family select and buy ladies' suits and coats
6. How usually plan to buy household linens

Score for Housing and Design Practices of Homemaker

1. Method of heating house
2. Kind of fuel used
3. Number of rooms per person
4. House comfortable in the summer
5. House comfortable in the winter
6. Privacy provided for each member of family
7. Conveniency of the house to live in
8. Facility with which the house is cared for
9. Comfortable furniture arrangement in living room
10. Convenient furniture arrangement in living room
11. Furniture repair needed
12. Refinishing of furniture needed
13. Painting of furniture needed
14. Reupholstering of furniture needed
15. Reseating of furniture needed
16. Knowledge of how to repair, refinish, paint, reupholster, and reseat furniture
17. Home furnishings done by members of family

ED018714

EVALUATION STUDY OF FARM AND HOME MANAGEMENT PROGRAM IN NEW YORK STATE

STUDY OF THE OPERATIONS OF THE FARM AND HOME MANAGEMENT PROGRAM IN NEW YORK STATE

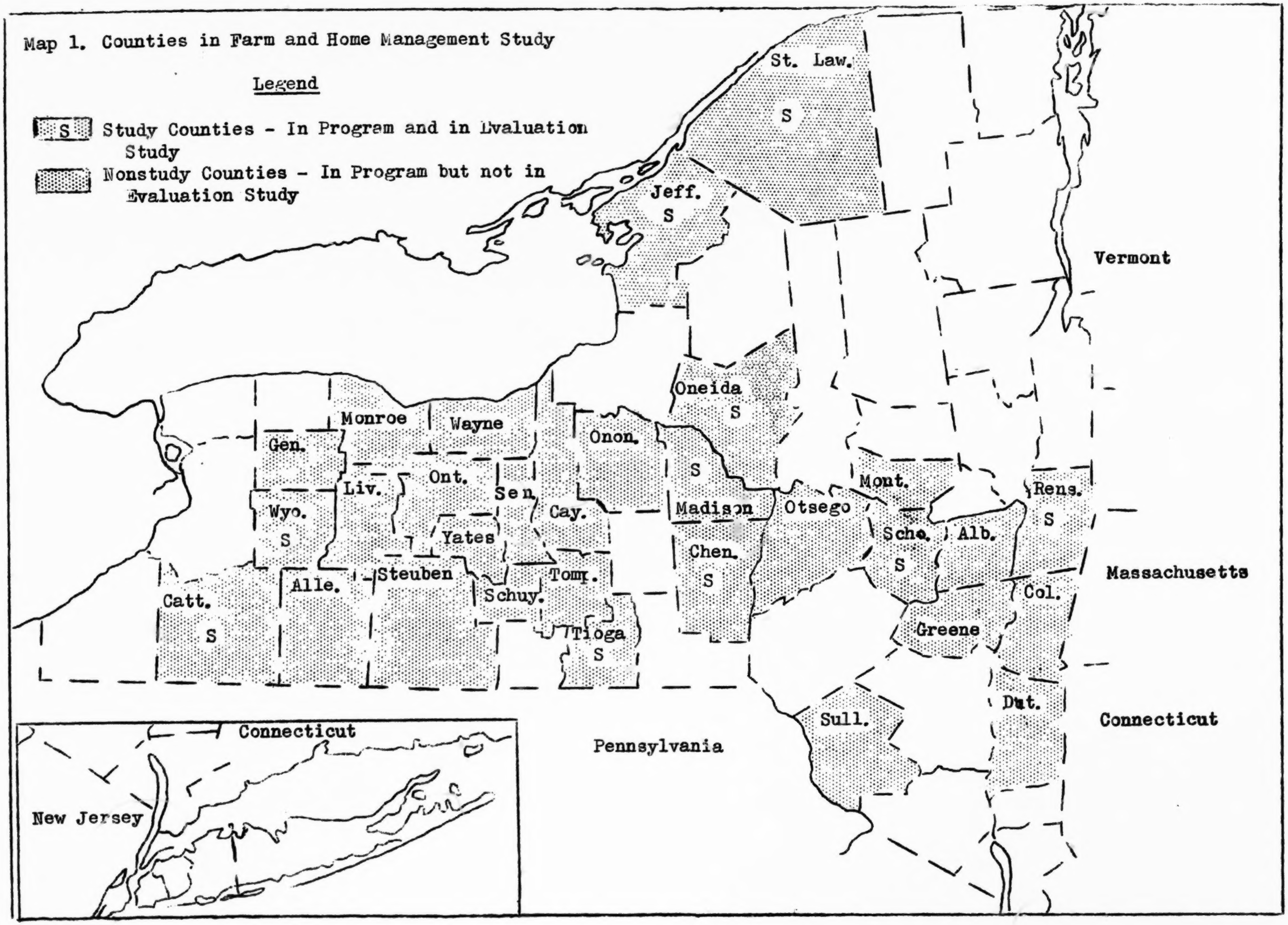
Report No. 2
(Summary and Conclusions)

Office of Extension Studies
State Colleges of Agriculture and Home Economics
Cornell University
Ithaca, New York
January 15, 1959

Authors: Frank D. Alexander, Administrative Specialist in Extension Studies and James W. Longest, Associate Administrative Specialist in Extension Studies.

Copies of a detailed report on which the summary and conclusions are based may be obtained from the Office of Extension Studies, New York State Cooperative Extension Service.

Map 1. Counties in Farm and Home Management Study



Legend

- S Study Counties - In Program and in Evaluation Study
- ▨ Nonstudy Counties - In Program but not in Evaluation Study

St. Law.
S
Jeff.
S
Vermont
Oneida
S
Monroe
Wayne
Gen.
Onon.
S
Liv.
Ont.
Sen
Mont.
Rens.
S
Wyo.
S
Cay.
Madison
Otsego
Yates
Sche.
Alb.
Chen.
S
S
Steuben
Tomp.
Massachusetts
Alle.
Schuy.
Catt.
S
Col.
Tioga
S
Greene
Dut.
Sull.
Connecticut
Pennsylvania
Connecticut
New Jersey

PREFACE

A basic principle which has been followed in the Evaluation Study of the Farm and Home Management Program in New York State is that an adequate evaluation requires not only measurement of changes in the participants but also a clear and comprehensive knowledge of the Program as it actually operates. Only with such knowledge can research techniques be developed for effective study of the participants. Moreover, an accurate description of the Program as it has actually been conducted is necessary to provide full understanding of measurement of changes in the participants.

Following this basic principle each year since the study was initiated in 1956, the agents responsible for the Program in the 10 counties which are included in the study have been interviewed for the purpose of finding the kind of Program which they were conducting and their reactions to their experiences. In 1958 detailed questionnaires for both agricultural and home demonstration agents were prepared for studying the operations of the Program. The survey was first conducted in the 10 counties included in the evaluation study. It was then expanded to the 20 other counties in the State which are conducting Farm and Home Management programs. The 20 additional counties were included so that a description of the entire Program could be prepared and in order to ascertain how well the Program in the 10 study counties represents the Program in the State.

The first report in the Evaluation Study of the Farm and Home Management Program in the State of New York was entitled, "Evaluation Study of Farm and Home Management Program in New York State - Adequacy of Sample and Control Group with Statement of Study Design", Report No. 1. This report is the second in a series that will be prepared as a part of the Evaluation Study. If the report is read following a reading of the "Introduction" of Report No. 1, its significance will be more apparent and a better understanding of the details of Report No. 1 should also follow.

The statistical work for Report No. 2 was done by Marilyn Spring and Jean Harshaw. The report was typed by Margaret Archibald. The interviewing of agents was done by James Longest and Frank Alexander.

SUMMARY OF THE STUDY OF THE OPERATIONS OF THE FARM AND HOME MANAGEMENT PROGRAM IN NEW YORK STATE

I. Introduction.

A. Purpose.

1. To ascertain for counties participating in the Program the subject matter and methods being used and reactions of agents to their experiences.

2. To compare the 10 counties included in the Evaluation Study of the Farm and Home Management Program with the 20 nonstudy counties in order to ascertain how well the study counties represent the Program in the State.

B. Method and scope.

1. Thirty-nine agricultural agents in 30 counties and 11 home demonstration agents in 13 of the 30 counties were interviewed through the use of questionnaires by representatives from the Office of Extension Studies during the late spring and early summer of 1958.

2. Ten of the 30 counties are included in the Evaluation Study of the Farm and Home Management Program.

II. Farm management phase of the Program.

A. Year entered Program.

1. Fifty-three per cent of the 30 counties entered the Program after 1955.

2. In the case of the 10 study counties 20 per cent entered the Program after 1955, whereas 70 per cent of the 20 nonstudy counties entered after that date. These are important facts to remember in the subsequent comparisons of study and nonstudy counties.

B. Number of participating families.

1. At the time of the survey 1,639 families were participating in the farm management phase of the Program. Of these 1,639 families, 471 were also participating in the home management phase.

2. The average (median) number of participating families per county was 48.5 with a range from 11 to 146.

3. The average (median) number of participating families per county in the 10 study counties was 65.0 with a range from 29 to 146 and in the 20 nonstudy counties 45.0 with a range from 11 to 90.

C. Participating families according to type of farming in which engaged.

1. Of the 1,639 participating families, 79.0 per cent are engaged in dairying only or dairying in combination with some other enterprise; in the 10 study counties the percentage was 93.1 compared to 69.0 in the 20 nonstudy counties.

D. Subject matter being considered in the Program.

1. A large proportion of the 30 counties have considered to some extent all of the 38 subject-matter items listed in the questionnaire. The lowest per cent of counties considering an item was 73 for agronomy - entering important field data on farm map.

2. For 26 of the 38 subject-matter items the per cent of study counties in which some attention was given the items exceeded the per cent of nonstudy counties, for the remaining 12 items the percentages were the same for both groups of counties.

3. When subject-matter items were weighted by proportion of families exposed to each and arrayed on the basis of per cent of counties in which 50 per cent or more of the participating families had been exposed to various items, 12 of the upper 13 items deal with some aspect of analysis. Moreover, for each of these 12 items, 88 per cent or more of the counties in which these types of subject matter were considered had exposed 50 per cent or more of their participants to such subject matter.

4. Fertilization, feeding of roughage, interpreting soil tests, number of heifers, seed selection, harvesting time, grain feeding of milk cows; all subject-matter items that would normally follow business analysis, have received considerable emphasis when weighted by per cent of families exposed.

5. When the study and nonstudy counties are compared on subject-matter items weighted by proportion of families exposed neither group of counties stands out with a consistently higher percentage of counties for a large proportion of the subject-matter items.

6. Agents were asked to list the steps which they advise or try to follow in helping families make a managerial decision. A summary of their listings follows:

Steps	Per cent of agents listing each step (35 agents)
Problem	20
Goals	29
Study of situation	69
Experience of others	17
Alternatives	54
Consider costs and returns	77
Means	20
Decide	31
Trial	6

7. No important difference exists between agents in study and nonstudy counties in the listing of decision-making steps.

8. In 40 per cent of the 30 counties in the Program both farm business and family living goals have been considered by 51 per cent or more of the participating families. The study counties have a better record in this respect than the nonstudy counties.

E. Selected general and specific methods used in Program.

1. General methods used.

   a. Farm and home visits have been used in all counties. From 97 to 83 per cent of the counties have used College publications, group meetings, county farm news, and letters or cards with seasonal reminders. About two-thirds of the counties have used local newspaper articles. Farm walks have been used by only one-third of the counties and tours by less than one-fourth.

   b. There is no consistent pattern of difference between study and nonstudy counties with respect to general methods used in the Program.

2. Specific methods used.

   a. Ninety per cent of the counties have compared individual summaries with averages, and from 83 to 70 per cent have used specialists on individual farm visits, used farm maps for analysis and planning, and used specialists at group meetings. In 60 per cent of the counties the participants summarized their own cash account and inventory books and in 40 per cent the College did this.

   b. There is no consistent position for either the study or nonstudy counties with respect to which group has higher percentages for various specific methods.

3. General methods weighted by extent of participant exposure.

   a. When general methods used are weighted by per cent of participants exposed farm and home visits and letters or post cards are in first position. Farm and home visits were used with 50 per cent or more of the participants in all 30 counties. In all the 25 counties in which they were actually used, letters or post cards with seasonal reminders were used with 50 per cent or more of the participants. In view of the emphasis that has been placed on farm walks it should be noted that none of the 10 counties having farm walks had 50 per cent or more of the participating families involved.

   b. When weighted by proportions of participants involved the nonstudy counties slightly surpass the study counties in exposing participants to general methods.

4. Specific methods weighted by extent of participant exposure.

   a. When specific methods are weighted by per cent of participants exposed, almost all (93 per cent) of 27 counties **which compared** individual summaries with averages, had used the method with 50 per cent or more of their participants.

   b. Eighty-two per cent of 12 counties which had the College summarize cash account and inventory books and 72 per cent of them (N = 18) which had participants summarize their own cash account and inventory books had 50 per cent or more of their participants involved.

   c. As weighted by per cent (50 +) of participants exposed, the use of farm maps, the use of specialists for farm visits, the use of panels of participants at meetings, and use of specialists on tours have had from moderate to low emphasis.

   d. A larger proportion of the nonstudy than study counties had 50 per cent or more of their participants involved for 5 of 8 specific methods.

5. Wives in the participating families were involved to some extent in all of the counties in which the methods were used for 7 of 14 methods.

6. In general the study and nonstudy counties are not markedly different in respect to exposure of wives to the various methods used.

7. Agents having major responsibility for the Program in each county ranked the various methods used according to purpose, i.e., 1) to teach principles, ideas, and techniques; 2) to solve individual problems; 3) to give information.[1]

   a. For group meetings, use of specialists at group meetings, use of participant panels, and College summarizes records, 76 to 50 per cent of agents using these methods indicated the first purpose - to teach principles, ideas, and techniques.

   b. For farm and home visits and farm walks, 71 to 50 per cent of agents using these methods respectively indicated the first purpose - to solve individual problems.

   c. For letters or cards and tours, 64 and 57 per cent of agents using these methods respectively indicated the first purpose - to give information.

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[1] Because of the complexity of information, no comparison of study and nonstudy counties is attempted on this item. Tables containing data on the 2 groups of counties for this topic are in Appendix B.

8. Agents having major responsibilities for the Program in each county rated various methods used on an effectiveness scale.

   a. According to the per cent of agents rating them very effective the 6 general methods fall into the following order:

Methods	Per cent of agents rating very effective
Farm and home visits (N = 30 cos.)	67
Farm walks (N = 10 cos.)	60
College publications (N = 29 cos.)	35
Group meetings (N = 26 cos.)	23
Tours (N = 7 cos.)	14
Letters and cards to participants (N = 25 cos.)	8

   b. According to the per cent of agents rating them very effective the 8 specific methods fall into the following order:

Methods	Per cent of agents rating very effective
Use of specialists on individual farm visits (N = 25 cos.)	72
Panels of participants at group meetings (N = 3 cos.)	67
Comparing individual summary with averages (N = 27 cos.)	63
Participants summarize records (N = 18 cos.)	50
College summarizes reocrds (N = 12 cos.)	42
Use specialists at group meetings (N = 21 cos.)	38
Use farm maps for analyzing and planning (N = 23 cos.)	35
Use specialists on tours (N = 4 cos.)	25

   c. There are some marked differences between study and nonstudy counties with respect to per cent of agents rating methods very effective. Considerably larger percentages of the study than of the nonstudy county agents rate very effective group meetings, participants summarize cash account and inventory books, College summarizes cash account and inventory books, use of specialists on tours, and use of farm maps for analysis and planning. The reverse is true for farm walks, tours, letters or cards to participants, panels of participants at group meetings, and use of specialists at group meetings.

F. Other aspects of methods.

1. Farm and home visits.

    a. The average (median) for the 39 agents is 3.7 visits per family per year, with a range from 1 to 9.

    b. The agents in the nonstudy counties have an average (median) of 3.9 visits compared to 2.9 for the study county agents.

2. Making appointments for visits.

    a. Slightly over two-thirds of 39 agents usually or always make appointments.

    b. A slightly higher percentage of the nonstudy than of the study county agents follow the practice of always or usually making appointments.

3. Try to bring wife into discussions.

    a. Slightly over two-thirds of 39 agents always or usually try to bring wives into discussions.

    b. The agents in the study and nonstudy counties do not differ greatly in respect to the per cent who always or usually try to bring wives into discussions.

4. Number and attendance at group meetings.

    a. The average (mean) number of group meetings of participants held in the 30 counties during the past year was 10, with the study counties having an average of 23 and the nonstudy counties only 5. The range for number of meetings in the study counties was from 2 to 75 and in the nonstudy counties from 0 to 18.

    b. The estimated average (mean) attendance at group meetings for the 26 counties which held them was 14.5, for the 10 study counties it was 12.5 and for 16 nonstudy counties 15.4. The range for the study counties was from 6 to 40 and for the nonstudy counties from 9 to 35.

5. How long should families remain in Program.

    a. As high as 16 per cent of 39 agents either did not know or had no specific answer as to how long families should remain in the Program.

    b. Sixty-one per cent thought 3 years was satisfactory.

    c. The agents in the study counties are much less certain than those in the nonstudy counties about how long participants should remain in the Program.

6. Asking other agents on staff to help with Program.

    a. All of the 39 agents have asked other staff memebers to help with the Program.

    b. Other staff members help with specialized subject matter other than farm management in 42 per cent of the 30 counties.

    c. The nonstudy county agents mentioned more frequently than the study county agents receiving help with specialized subject matter other than farm management.

7. What consciously do to gain confidence of families.[1]

    a. Try to show family confidential nature of work was mentioned most often - 12 times.

    b. Show sincere interest in their problems was mentioned 10 times.

G. Relationships with organizations, business concerns, and public agencies in conducting the Program.

1. With organizations and/or business concerns the relationships have been principally informing about and discussing the Program at meetings or with officials. There has been a considerable amount of this type of relationship. The proportions of counties reporting otherwise worked with for organizations and/or business concerns are generally small. PCA is outstanding with 50 per cent of the counties reporting otherwise worked with.

2. A larger per cent of the nonstudy than study counties have had no relationship with 8 of 12 organizations or business concerns in conducting the Program.

3. In the case of agencies, both informing and discussing as well as otherwise working with occurs fairly frequently. The SCS and FHA are the 2 agencies for which otherwise worked with is outstanding, with 57 and 60 per cent of the counties respectively involved.

4. The differences between the study and nonstudy counties with respect to relationship to agencies neither follow a consistent pattern nor seem to be important.

H. Needs of agents working on Program.

1. Adequacy of training for Program.

    a. Ninety-four per cent of 39 agents thought they had adequate or very adequate training for conducting the Program.

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[1] Because of the wide variety of answers generally given to open-end questions (Item 7 is this type of question.) throughout the study with only a few exceptions comparisons of study and nonstudy counties on information obtained by these questions are not attempted.

b. All of the study county agents and 92 per cent of the nonstudy county agents felt they had adequate or very adequate training for conducting the Program.

2. Additional training needed by agents rating themselves adequately or less than adequately trained.

   a. There is no important agreement among agents on additional training needed. Budgeting was mentioned 4 times, what to do after summarizing 3 times, and counseling 3 times.

3. Adequate educational tools.

   a. Almost three-fourths of the 39 agents think they have adequate educational tools.

   b. More of the study county than nonstudy county agents think they have adequate educational tools.

   c. Tools mentioned by those answering "no" included the following:

      (1). Debt management sheet.
      (2). Herd analysis sheet.
      (3). Adequate forms for analysis of vegetable and fruit enterprises.
      (4). Form to take off income tax information from record books.
      (5). Tools for fruit, vegetable, and poultry operators.
      (6). More teaching tools for budgeting.
      (7). More adequate budget forms.
      (8). More information on general farming and enterprise combination, also including home aspect.
      (9). Improved book for more simplified record keeping.

4. Need specialists' help other than in management.

   a. Almost all of the 39 agents with little difference between those in study and nonstudy counties stated they need help from other than management specialists.

   b. Specialized areas in which help is needed and which were mentioned by 2 or more agents are:

	Number of times mentioned
Engineering	13
Agronomy	12
Dairying (animal husbandry)	12
Marketing	5
Soils	4
Vegetables	3
Marriage counseling	2
Poultry	2
Farm analysis for vegetables by vegetable specialists	2
Farm analysis for fruits by fruit specialists	2

I. Problems agents face.

1. Education or service.

    a. Fifty-nine per cent of the 39 agents consciously concern themselves with education versus service.

    b. A higher per cent (69) of the study county than of the nonstudy county agents (54 per cent) consciously concern themselves with this problem.

    c. Of the 23 agents who consciously concern themselves with this matter only about one-fourth find it difficult to decide which jobs are educational and which service.

    d. The nonstudy county agents more often (33 per cent) than the study county agents (21 per cent) find it difficult to decide whether jobs are educational or not.

    e. The principle most frequently mentioned which agents act on regarding this problem is that service is considered an opportunity or occasion for education (some of these answers suggested repeating a service if necessary to do an effective educational job or being careful not to repeat since purpose is to educate).

2. Time spent with families.

    a. Almost three-fourths of the 39 agents do not spend as much time with families as they would like.

    b. A larger per cent (85) of the study than of the nonstudy county agents (65 per cent) feel they do not spend as much time as they would like with the participating families.

3. Views of agents about how an agent working on the Program should spread his interests.

    a. The views of agents are somewhat varied on this matter. Slightly over one-third of the 39 agents think that an agent working on the Program should work on it with a minimum of other responsibilities.

    b. The agents in the study counties more than in the nonstudy counties would prefer working on the Program in combination with no other or a minimum of other Extension responsibilities.

4. Characteristics of families agents find it difficult to work with.

   a. Characteristics mentioned by agents most frequently were:

	Number of agents mentioning
Unwilling to give you facts	7
Personality and/or family conflict	5
Claim want help but don't follow through	3
Obstinate about adopting recommended practices	3
Unstable family (going from one thing to another)	2
Independent and/or indifferent ones	2
Refuse to recognize problems	2
Self-sufficient	2
Previous family background	2

J. Evaluation of Program by agents.

1. What does Farm and Home Management Program offer that no other Extension activity provides?

   a. Characteristics mentioned 5 or more times were personal or individual approach (19), analysis of situation (14), whole farm approach (9), effective guidance of agents in work with families (6), and intensive work with families (5).

2. How Program has influenced total county Extension Program.

   a. A wide variety of ideas concerning the influence of the Program on the total county Extension Program was given.

   b. The following are the principal categories of ideas with number of mentions:

Idea	Number of mentions
Relating to content of Program	32
Relating to agent's viewpoint or behavior	22
Relating to participation in Extension activities	8
Relating to status of Extension in county	3
Relating to relationship of Extension's departments and of Extension with other agencies	3
No basic change in program	4

3. How important agents think the Program should be.

    a. Rated on basis of agent in-put 77 per cent of the agents thought the Program justified 1 or more agents.

    b. The study county agents (92 per cent) much more frequently than the nonstudy county agents (69 per cent) thought the Program justified 1 or more agents.

4. Cooperation of participating families.

    a. In 71 per cent of the counties the agents think over 70 per cent of the participating families are very cooperative.

    b. The per cent (75) of nonstudy counties whose agents think over 70 per cent of the participating families are very cooperative is greater than the per cent (60) of study counties in which this is true.

5. How many families can 1 agent work with efficiently per year.

    a. The average (median) number given by the agents is 61.1 with a range from 25 to over 100.

    b. The average (median) number in the study counties is 64.4 compared to 53.3 for the nonstudy counties with wide ranges in both cases.

6. Evaluation of training activities.

    a. Personal work of farm management specialists with agents holds first position with 69 per cent of 39 agents rating it very much help.

    b. The study and nonstudy counties have the same per cent (69) of agents rating personal work of farm management specialists very much help.

    c. The training conferences held at the College of which there had been 11 at time the survey was begun probably represent the core of formal training for the Program. Only 11 per cent of 37 agents rated them very much help, however, 46 per cent rated them much help and another 43 per cent some help.

    d. The composite ratings of the study county agents for these training conferences at the College are higher than the same ratings of the nonstudy county agents.

7. Agents' views of how important others in the Extension organization consider the Program.

    a. Of 8 individuals or groups of individuals who might be considered to have some relationship to the Program, farm management specialists ranked first with respect to per cent (92) of agents who think this group considers the Program to be very important with 100 per cent of the study county agents and 88 per cent of the nonstudy county agents holding this opinion.

b. Other individuals or groups in order with high percentages of agents thinking they consider the Program very important were state leader of your department and state leader who supervises your county.

c. The per cent of study county agents is larger than that of nonstudy county agents who think the state leader of their department considers the Program very important, but a larger per cent of the nonstudy county than of study county agents think the state leaders who supervise their counties consider the Program very important.

d. No group of specialists other than farm management was thought to consider the Program very important by any large percentage of agents.

e. Slightly over three-fourths of the agents think Extension administrators above the state leader level consider the Program very important or important.

f. All of the study county agents and about two-thirds of the nonstudy county agents think that the administrators above the state leader level consider the Program very important or important.

III. Home management phase of Program.[1]

A. Year entered Program.

1. Over two-thirds of the 13 counties in which the home demonstration department is involved in the Program entered it after 1955.

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[1] Because of the small number of counties and home demonstration agents involved, no attempt has been made to compare study and nonstudy counties for the home management phase of the Program.

2. One home department entered the Program at the time the agricultural department in the county did, but the other 12 departments entered the Program after their corresponding agricultural departments had entered it.

B. Number of participating families.

1. At the time of the survey 474 families were being worked with by the home demonstration agents.

2. The average (median) number of families per county is 36.0 with a range from 14 to 70.

3. In 11 of the 13 counties the number of families with which the home demonstration agents work was smaller than the number with which the county agent was working.

C. Subject matter being considered.

1. Of 19 subject-matter items about which agents were asked, 12 had been taught in over three-fourths of the 13 counties.

2. How to keep a home account book and how to keep a home inventory were the 2 subject-matter items which have been considered in the greatest proportion (92 per cent for each) of counties.

3. How to keep a home account book is at the top of the list of subject-matter items when items are weighted by the percentage of families exposed to them.

4. The most frequently mentioned decision-making steps which home demonstration agents advise participating families to follow are study of the situation, alternatives, results (cost) of alternatives, and choice of solution.

5. In slightly less than one-third of the 13 counties the home demonstration agents have worked with from 71 to 90 per cent of the participating families on both farm and family goals.

D. Selected general and specific methods used in Program.

1. General methods used.

   a. Both farm and home visits and College publications have been used in all 13 counties and both group meetings and management conferences have been used in 85 per cent of the counties.

2. Specific methods used.

   a. Use of specialists at group meetings and use of specialists on individual farm visits have been used by a larger proportion (69 per cent in both instances) of counties than have any other of the 6 specific methods about which agents were asked.

3. General methods weighted by extent of participant exposure.
   a. When weighted by the proportion of participants exposed, farm and home visits is the outstanding general method agents have used. College publications ranks second.
4. Specific methods weighted by extent of participant exposure.
   a. Only having specialists at group meetings has been used extensively when weighted by per cent of participants exposed.
5. The exposure of husbands to various methods used by the home demonstration agent is fairly extensive.
6. Concensus among agents regarding the primary purpose of various methods is not marked.
7. Of the 7 general methods rated by agents as to effectiveness, management conferences were rated very effective by the largest per cent (82) of agents. No other general method approached this one in per cent of agents rating it very effective.
8. Of the 6 specific methods rated by agents as to effectiveness, the use of specialists at group meetings had the highest per cent (33) rating it very effective.

E. Other aspects of methods.

1. The average (median) number of farm and home visits per agent per year for 12 agents is 2.9 visits. Forty-six per cent of the agents estimated from 1 to 2 visits and 8 per cent 5 visits.
2. About two-thirds of 13[1] home demonstration agents always or usually make appointments for home visits.
3. About two-thirds of 10[2] agents always or usually seek to bring both husbands and wives into discussions.
4. The average (mean) number of group meetings held in the 13 counties in the past year was 8.9 with a range from 0 to 36.
5. The average (mean) attendance at group meetings in the 11 counties holding group meetings in the past year was 15.9 with a range from 4 to 50.
6. Fifty-five per cent of 11 agents think that either 2 or 3 years is the length of time families should remain in the Program. However, 27 per cent would give no specific number of years.

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[1] One agent-at-large who was working in 4 counties is counted as 4 agents.

[2] The agent-at-large is counted only 1 time since she gave this information for this practice in general and not for each county in which she worked.

7. Most of 13 agents who have major responsibility for the Program have gotten help from other staff members in conducting the Program.

8. While not agreeing to any great extent, most of 9 agents indicated considerable sensitivity as to techniques for gaining the confidence of families.

F. Relationship to organizations, business concerns, and public agencies, in conducting Farm and Home Management Program.

1. In only a few of the counties have the agents had any relationships of this kind. The more important of these relationships have been with women's organizations, the Grange, and the FHA.

G. Needs of agents working on the Program.

1. Eighty-two per cent of 11 agents thought they had been adequately or very adequately trained for conducting the Program.

2. The kinds of training needed by those who rated themselves adequately or less than adequately trained and mentioned by more than 1 agent are housing problems, counseling, household equipment, and homemaking work units (time management).

3. Nine-tenths of 10 agents think they have adequate educational tools.

4. Ten of 11 agents think they need help from other than home management specialists. The kinds of help needed most are in housing, foods, family life, and clothing.

H. Problems agents face.

1. Four-fifths of 10 agents consciously concern themselves with the problem of service versus education in conducting the Program but of the ones who do this only one-third find it difficult to decide which jobs are educational and which service.

2. The principle most often mentioned by 8 agents which is followed in resolving the problem of education versus service is that service is considered an opportunity or occasion for education.

3. In about two-thirds of the 13 counties the agents think they are not able to spend as much time with participants as they would like.

4. In terms of workload of agents involved in the Program there is some degree of concensus with half of 14 agents thinking the agent working on the Program should have that responsibility and 1 other strong responsibility.

5. There is little agreement among 10 agents concerning the characteristics of families with which they found it difficult to work. The characteristic mentioned most often was "feel no need for help".

I. Evaluation.

1. The unique characteristics of the Farm and Home Management Program as contrasted wtih other Extension activities which 11 agents mentioned most often are: individual help, really get to know participants, helping to see individual problems, and home visits; all of which emphasize intimacy of teacher-pupil relationship.

2. The agents indicated that the Program has influenced the total Extension program in their counties in that management is becoming a more important subject-matter area and in some cases the home visit is being seen as a means for keeping in touch with the homemaker.

3. In rating the importance of the Program in terms of agent time, almost two-thirds of 14 agents think it justifies 1 agent full-time.

4. There is a wide variation in agents' opinions concerning the proportion of participants who are very cooperative. Only 24 per cent of 13 agents think that more than half of the families with whom they are working are very cooperative and would like more of their time.

5. The average (median) number of families which the agents think 1 agent can work with efficiently per year is 54.5 with a range from 35 to 100.

6. Of the 8 kinds of training which the agents rated the personal work of home management specialists with agents and the 11 training conferences held at the College were rated very much help by the largest proportions of the agents.

7. Of the 12 individuals or groups of individuals other than the agents themselves who might be expected to have some relationship to the Program, 11 were thought by over half of the agents to consider the Program very important or important. Economics of the household and household management specialists and state leader who supervises your county are in first place in terms of the per cent (100) of 11 agents who think they consider the Program very important or important.

CONCLUSIONS

I. All counties in the Program.

A. The Farm and Home Management Program in New York State is being conducted principally with dairy operators.

B. The Program is primarily a farm management program in more than half the counties in which it is being conducted and for almost three-fourths of the participating families. However, in a number of counties the agricultural agents have given considerable attention to both farm and home goals.

C. The subject matter being taught in the farm management phase of the Program is focused on analysis of the farm business and in the home demonstration phase of the Program on home account records.

D. Both the agricultural and home demonstration agents show some consensus with respect to decision-making steps which they are trying to teach but there seems to be some lack of conciseness in their conceptualization of these steps.

E. Farm and home visits when measured by extent of exposure of participants is the first ranking method of both agricultural and home demonstration agents; however, for both groups of agents, the number of visits per family per year is not particularly large.

F. While agricultural agents consider the farm and home visits their most effective general method, home demonstration agents consider management conferences their most effective general method.

G. The agricultural agents consider the use of specialists on individual farms and comparing individual summaries with averages as their most effective specific methods. The home demonstration agents think their most effective specific method is use of specialists at group meetings.

H. The widespread use of comparing individual summaries with averages in the farm management phase of the Program represents the introduction of a specific method of teaching that seems to have considerable potential in terms of motivation.

I. There is evidence that the Program has exposed a number of men to home demonstration and an ever larger number of women to agricultural teaching.

J. Compared to home demonstration agents, the agricultural agents have more concensus with respect to the first ranking purpose for which they use various methods - to teach principles, ideas, and techniques; to teach to solve individual problems; or to give information.

K. Both agricultural and home demonstration agents are making use of group meetings and securing attendance that is probably effective for teaching analysis and record keeping which requires small groups in order that individual problems and questions may be given adequate attention.

L. While there is some uncertainty among both agricultural and home demonstration agents as to how long people should remain in the Program, in general the period favored is 2 or 3 years.

M. The agricultural agents have felt it was important to inform about or discuss the Program with organizations, business concerns, and public agencies and have worked with SCS and FHA in connection with participants in a number of instances. The home demonstration agents have not been very active in terms of these relationships.

N. On the whole both agricultural and home demonstration agents consider themselves adequately or very adequately trained for conducting the Program.

O. There is a felt need by agricultural agents for help from specialists other than management specialists in engineering, agronomy, and dairying (animal husbandry); in the case of the home demonstration agents the need is for specialists' help in housing, foods, family life, and clothing.

P. While fairly large proportions of both agricultural and home demonstration agents consciously concern themselves with service versus education in working with the participants, a much smaller proportion of both find this problem difficult to resolve. The principle for resolving the problem which a number of both groups of agents follow is to make a service an opportunity for educational work.

Q. The distinctive characteristics of the Program in contrast with other Extension work mentioned most often by agricultural agents are personal or individual approach, analysis of situation, and whole farm approach; and by home demonstration agents are individual help, really get to know participants, helping to see individual problems, and home visits.

R. The agricultural agents think the Program has influenced their total county program both in respect to content and viewpoint and behavior of the staff, and they can cite concrete evidence of these influences. The home demonstration agents think the principal influences have been for management to become a more important subject-matter area and in some instances for the home visit to be accepted as an effective way for keeping in touch with homemakers.

S. Large proportions of both agricultural and home demonstration agents think the Program important enough to justify at least 1 agent full-time.

T. Both the agricultural and home demonstration agents place first among the various kinds of in-service training received the personal work of specialists in the respective fields of farm and home management.

U. The agricultural agents place first the specialists in farm management as the relevant Extension personnel other than themselves who consider the Program very important. The home demonstration agents rank the home management specialists and the state leaders who supervise their counties first in terms of considering the Program very important or important.

II. Comparison of study and nonstudy counties for farm management phase of Program.

A. A **large** proportion of the study counties had entered the Program by the end of 1955, whereas almost an equal proportion of the nonstudy counties entered after that date. This difference between the 2 groups of counties in length of time in the Program is undoubtedly an important influence on some of the other differences between the 2 groups of counties which appear in this study.

B. When the study and nonstudy counties are compared:

1. The study counties -

   a. Have a higher average number of participants.

   b. Have a higher per cent of participants engaged in dairy only or dairying in combination with another enterprise.

   c. Have a higher per cent of counties with a broader scope of subject matter.

   d. Have a higher per cent of counties with 51 per cent or more of their participants worked with on both farm and family goals.

   e. Have a larger average number of group meetings.

   f. Have a larger per cent of agents who are uncertain as to how long families should remain in Program.

   g. Have a higher per cent of agents who think they are adequately or very adequately trained.

   h. Have a higher per cent of agents who think they have adequate educational tools for farm management work.

   i. Have a higher per cent of agents who consciously concern themselves with the problem of education versus service in working with participants.

   j. Have a higher per cent of agents who feel they do not spend as much time with families as would like to.

  k. Have a higher per cent of agents who think the agent working on the Program should limit himself largely to it.

  l. Have a higher per cent of agents who think the Program is important enough to justify 1 or more agents full-time.

  m. Have a higher average number of persons which agents think could be worked with efficiently.

  n. Have agents who generally rate the Program training conferences at College more highly.

  o. Have higher per cent of agents who think farm management specialists consider Program very important.

  p. Have higher per cent of agents who think state leader of the agricultural department considers Program important.

  q. Have higher per cent of agents who think administrators above state leader level consider Program very important or important.

2. The nonstudy counties -

  a. Are ahead with respect to the use of general methods when weighted by proportion of participants exposed.

  b. Have a higher per cent of counties for a greater number of specific methods used when these methods are weighted by proportion of participants exposed.

  c. Have a higher per cent of counties in which agents rate a greater number of general methods very effective.

  d. Have a larger average number of farm and home visits.

  e. Have a higher per cent of agents who usually or always make appointments for visits to participants.

  f. Have a larger average attendance at group meetings of participants.

  g. Have a larger per cent of agents who receive help in conducting the Program from other county staff members in specialized fields other than management.

  h. Have a larger per cent of counties which have no relationships with a large proportion of organizations or business concerns.

i. Have larger per cent of agents who find it difficult to resolve the problem of education versus service.

j. Have larger per cent of agents who think the state leader who supervises their counties considers Program very important.

3. Both study and nonstudy counties -

a. Show no consistant pattern of difference --

(1). For subject-matter items actually used when these are weighted by proportion of participants.

(2). For decision-making steps which usually advise or try to help families follow.

(3). For whether or not use the general and specific methods about which were asked.

(4). For specific methods rated very effective.

(5). For relationships with public agencies in conducting Program.

b. Show no important difference --

(1). For exposure of wives of participating families to various methods.

(2). For practice of bringing wives into discussions.

(3). For need of agents for help from other than management specialists.

(4). For rating of personal work of farm management specialists with agents in terms of training.

C. The general conclusion derived from the foregoing comparison is that the Program in the 10 study counties is different from the Program in the 20 nonstudy counties and therefore the Program in the study counties cannot be considered representative of the Program in the other counties.

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EVALUATION STUDY OF FARM AND HOME MANAGEMENT PROGRAM IN NEW YORK STATE

THE FARM AND HOME MANAGEMENT PROGRAM IN NEW YORK STATE AS KNOWN AND VIEWED BY EXTENSION ADMINISTRATORS, SUPERVISORS, AND SPECIALISTS

Report No. 3

Office of Extension Studies
State Colleges of Agriculture and Home Economics
Cornell University
Ithaca, New York
June 15, 1960

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PREFACE

This is the third report which has appeared in connection with the Evaluation Study of the Farm and Home Management Program in New York State. The first report dealt with the adequacy of the sample and control group used for the major phase of the evaluation study and the second was concerned with the operations of the Program. This report examines the Program through the eyes of the Extension administrators, supervisors, and specialists. It parallels in some ways the second report which examines the Program through the eyes of the agents working in the Program.

It is believed that the second report together with this one presents a fairly adequate picture of the interpretations and understandings of the Program which are held by the college and county staffs responsible for conducting it.

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Summary of Findings

This is a study of Extension administrators, supervisors, and specialists to ascertain their knowledge of, views about, and evaluation of the Farm and Home Management Program in New York State. Included in the study are the Director and Assistant Director, 5 agricultural state leaders, 7 home demonstration state leaders, one home demonstration agent-at-large, 3 farm management specialists and one home management specialist.

I. Knowledge of or consensus about the Program

A. Knowledge of the subject matter which has been emphasized in the Program is fairly good.

B. Knowledge of Program methods is fairly good.

C. Knowledge of assignment of major responsibility for the Program to farm and home management specialists is very good.

D. Knowledge of total number of counties in the Program is good.

E. Knowledge is only average with respect to number of counties in which the home demonstration department is cooperating.

F. Knowledge of 4 important characteristics of participants is good.

G. Knowledge of functions of the College Steering Committee is good.

H. Knowledge of and consensus about the specific functions of 6 college Extension staff groups which are generally recognized as having responsibility for the Program is fairly good.

I. Consensus as to the specific functions of 9 college Extension staff groups marginally associated with the Program is only moderate.

J. Consensus is high that Program objectives have not changed.

K. Consensus is fairly high on Program objectives as stated by the respondents.

L. Consensus that Program costs have been very high or high is high.

II. Views about Program subject matter

A. Consensus that the steps in decision-making should be taught participants is fairly high.

B. Consensus as to broad definition of subject matter to be taught in the Program is fairly low.

C. Consensus that the subject matter of the Program should be essentially managerial and economic is very high.

III. Views about Program methods

A. Consensus is fairly high that the Program is important enough to warrant the agent (both agricultural and home demonstration) working on the Program distributing his or her interest so that he or she does farm and home management with a minimum of other Extension responsibilities.

B. Consensus as to how long participants should remain in the Program is low.

C. Consensus on 13 principles or guides for the cooperation of the agricultural agent and home demonstration agent assigned to the Program in a county is fairly high.

IV. Views about training of agents for the Program

A. Consensus with respect to the importance of in-service training oriented to management-economic emphasis for agents in the Program is very high.

B. A low degree of consensus exists with respect to training which can be interpreted as important for both agricultural and home demonstration agents working together in a Program involving both farm and home management.

C. Only moderate consensus exists for amount of future training to be given agents who have worked in the Program 2 or more years.

V. Evaluation of Program

A. In rating 12 methods as to effectiveness, consensus for very effective is high for only one method, namely, farm and home visits.

B. Consensus that the amount of special training agents in the Program have received has been about right is fairly high.

C. Consensus with respect to importance of the Program in terms of what should be the county agricultural staff's in-put, i.e., one agent full-time in a 3-agent county, is fairly high.

D. Consensus with respect to importance of the Program in terms of what should be the county home demonstration staff's in-put is low.

E. Consensus with respect to what the respondents believe various college Extension staff groups think as to the importance of the Program is high for very important for only one group (one person in this case) and fairly high for another group.

F. Consensus on the ultimate place of the Program in Extension work is low.

G. Consensus with respect to unique contributions of the Program is fairly high for the broad concept of "overall approach".

H. Consensus on influence of the Program at either county or state level is low.

Resumé

I. Knowledge of Program

	Distribution of 8 items of knowledge
Very good	1
Good	2
Fairly good	4
Average	1
Fairly poor	-
Poor	-
Very poor	-

Four other items were classified under knowledge of or consensus about the Program. For these items there was no reliable judgment as to correct or incorrect answers. For 2 of the items there was high consensus among the respondents, a third item showed fairly high consensus, and a fourth moderate consensus.

II. Consensus on views about subject matter, methods, and training of agents

	Distribution of 9 items relating to subject matter, methods, and training
Very high	2
High	-
Fairly high	3
Moderate	1
Fairly low	1
Low	2
Very low	-

III. Consensus on evaluation of the Program

	Distribution of 9 items relating to evaluation
Very high	-
High	-
Fairly high	2
Moderate	-
Fairly low	1
Low	6
Very low	-

From the preceding tabulations, the respondents' knowledge of the Program is good and their consensus with respect to items of knowledge having no correct or incorrect reference is at least fairly high. Consensus in regard to views about Program subject matter and methods and training of agents for the Program is not very marked. There is little consensus on evaluation of the Program.

Introduction

This is a study of Extension administrators, supervisors, and specialists, to ascertain their: 1) knowledge of the Farm and Home Management Program, 2) views about Program subject matter, 3) views about Program methods, 4) views about training of agents for the Program, and 5) evaluation of the Program. Questionnaires covering these areas were filled out during the latter half of 1959 by 19 persons including the Director of the Extension Service, the Assistant Director, 5 agricultural state leaders, 7 home demonstration state leaders[1], 3 farm management specialists, one home management specialist, and one home demonstration agent-at-large assigned to the Program.

Sixteen of the 19 respondents had been employees of the Extension Service for 10 or more years. Only 3 had been with Extension less than 10 years. Eight had been employees from 20 to 35 years. Seventeen had been in their present professional position from 1 to 5 years and 2 from 6 to 10 years. The range in age was from 26 to 62. Sixteen of the 19 were over 40 years of age.

Four of the 19 respondents had bachelor's degrees only, 9 bachelor's and master's degrees, and 6 bachelor's, master's, and Ph. D.'s degrees.

Knowledge of or consensus about the Program

The questions asked of respondents with respect to their knowledge of the Program in some instances have a correct answer, in others a correct answer is not available. Where answers have no correct or incorrect reference, only the consensus of the respondents is noted.

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[1] One of these retired before the study was completed.

Knowledge of Program subject matter

The respondents were asked to indicate the principal subject-matter topics which have been taught in the Program. A wide variety of listings resulted. The following tabulation presents a summary of the listings:

	Subject-matter topics	No. of mentions
1.	Management - general, or farm, or home, or both	23*
2.	Record keeping - farm or home	9
3.	Analysis of farm business	7
4.	Financial matters - farm or home	6
5.	Use of time - farmer or homemaker	5
6.	Business procedures - partnerships, credit	3
7.	Decision-making	2
8.	Work space for homemaker	2
9.	Decorating	1
10.	Engineering	1
11.	Agronomy	1
12.	Agricultural economics	1
13.	Budget planning - home and business	1
14.	Living space	1
15.	Home remodeling	1
16.	Livestock management	1
17.	Dairying	1
18.	Economic facts	1

* Some respondents listed more than one aspect of management.

The more frequently mentioned topics are for the most part the ones which have been emphasized in the Program[1]. However, "use of time" has been given little specific attention in teaching farm operators, and the same applies to "decorating" in teaching homemakers.

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[1] Frank D. Alexander and James W. Longest, Evaluation Study of Farm and Home Management Program in New York State, Study of the Operation of the Farm and Home Management Program in New York State, Report No. 2, Office of Extension Studies, State Colleges of Agriculture and Home Economics, Cornell University, Ithaca, N. Y., January 15, 1959, pp. 29-33 and 70-71.

Since teaching decision-making has been one of the objectives of the Program, it was considered desirable to find out how administrators, supervisors, and specialists had conceptualized the process. The respondents were, accordingly, asked to list the major decision-making steps according to sequence which agents should teach farm operators and homemakers. The tabulation below gives the answers by steps of the 17 who responded to this question.

Decision-making steps with titles given for each step	Number of respondents mentioning
Step 1	
Study, review, or know situation	10
Identify problem	6
Clarify goals or objectives	1
Total	17
Step 2	
Analysis of resources, appraise situation, study facts	8
Setting family goals, review goals or objectives of family	4
Define problems	2
Alternatives	2
Selection of problem or need	1
Total	17
Step 3	
Explore alternatives, determine alternatives, etc.	12
Decide on best course of action	2
Establish goals	1
Select and study information applicable to problem	1
Identify problems	1
Total	17
Step 4	
Evaluate, analyze, determine alternatives, etc.	7
Make decision on course of action, etc.	5
Make decision and plan to carry out	1
Make choice and accept responsibility	1
Develop plan of work	1
Put into operation	1
Total	16

Decision-making steps with titles given for each step	Number of respondents mentioning
Step 5	
Decide on one alternative	3
Put chosen course into action	3
Select plan of action	2
Put plan into action	2
Identify and evaluate alternatives	2
Recheck at intervals	1
Reevaluate	1
Total	14
Step 6	
Take action or put plan into action	4
Evaluate results	4
Selection of alternative	2
Total	10
Step 7	
Evaluate results	4
Reevaluate and adjust plan	1
Commitment of resources to chosen alternative	1
Put into operation	1
Accept consequences	1
Total	8
Step 8	
Recheck resources and goals and repeat	1
Review and evaluate success or progress	1
Total	2

The number of steps listed by the respondents varied as follows:

	Number of respondents
3 steps	1
4 steps	2
5 steps	4
6 steps	2
7 steps	6
8 steps	2

Six of the respondents listed 7 steps and only one 3 steps. About half (more or less) of the respondents agreed on somewhat the same designation for steps 1, 2, 3, and 7. The 2 most frequently mentioned labels given for steps 1 and 2 are quite similar, as are the 2 most frequently mentioned labels for steps 3 and 4. While the designations used for steps represent many similar verbalizations, the ordering of these does not reveal any great amount of common agreement.

The tabulation below attempts to classify in a possible logical sequence the designations given to steps by respondents but disregards their sequence of steps:[1]

Class of designations for steps	No. of times mentioned*
Identification of problems	8
Consideration of goals and objectives	7
Study of situation (including resources)	23
Examination of alternatives	19
Choice of one alternative	18
Develop plan of action	1
Put plan into operation	11
Acceptance of consequences	1
Evaluation	13

* Number of mentions is used here because in a few instances the respondents gave designations to more than one step which in this classification fall into one category.

The 5 categories which were mentioned most frequently are: 1) study of the situation (including resources), 2) examination of alternatives, 3) choice of one alternative, 4) evaluation, and 5) put plan into operation. The consensus of the respondents in respect to these 5 categories is fairly high, but it can hardly be claimed, even on logical grounds, that they provide a complete pattern for decision-making.

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[1] The logical sequence given in this tabulation was developed by the author on the basis of C. A. Bratton's sequence (See C. A. Bratton, New York Dairy Farm Business Summaries for 1956, mimeographed report, Department of Agricultural Economics, New York State College of Agriculture, A Unit of the State University of New York, Cornell University, Ithaca, N. Y., p. 2) and his own interpretation of the designations given by the respondents.

Knowledge of Program methods

Respondents listed what they thought were the principal methods which agents have been using in conducting the Program. The tabulation below gives the methods listed in order of number of persons listing each:

Methods	Number listing
Farm and home visits	13
Group meetings	13
Service letters	6
Tours of farms	5
Farm management club, group, etc.	5
Personal counseling	4
Farm walks	4
Bulletins (publications)	4
Office conferences	3
General meetings (few)	1
Small group meetings	1
Small neighborhood meetings	1
Group activities	1
Personal letters	1
Conferences	1
Telephone call	1
Movies	1
Special invitation to regular Extension meetings	1

The 2 methods, farm and home visits and group meetings, each of which was listed by 13 of the 19 respondents ranked first and third in per cent of counties reporting on the use of various methods in 1958[1]. Most of the methods listed by the respondents are known to have been used but some of them not very extensively.

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[1] Frank D. Alexander and James W. Longest, Evaluation Study of Farm and Home Management Program in New York State, Study of the Operation of the Farm and Home Management Program in New York State, Report No. 2, Office of Extension Studies, State Colleges of Agriculture and Home Economics, Cornell University, Ithaca, N. Y., January 15, 1959, pp. 35 and 73.

The respondents were also asked to indicate what they thought had been the relative emphasis of the agents with respect to 2 methods, i.e., farm and home visits and group meetings. Their responses are given in the following tabulation:

	Number thinking agent relied principally on
Group meetings	1
Farm and home visits	10
About equally on each	8
Total	19

According to the findings of the study of operations of the Program made in 1958, agricultural agents connected with the Program had made very extensive use of farm and home visits but had also used group meetings fairly extensively. the home demonstration agents made fairly extensive use of farm and home visits, but not as much as had the agricultural agents; and they had not used group meetings extensively[1]. In general it seems the administrators, supervisors, and specialists have a fairly good knowledge of the relative use made of these 2 methods by the agents.

Knowledge of specialists assigned major responsibility for Program

Eighteen, or 95 per cent, of the 19 respondents indicated that they thought the major responsibility for the subject matter had been assigned to the specialists in farm and home management. Only one respondent disagreed.

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[1] Ibid., pp. 37-38 and 74-75.

It is generally recognized that this responsibility was given to these 2 groups of specialists by the Director of the Extension Service at the beginning of the Program.

Since there has, however, been some discussion from time to time as to the role of subject-matter specialists other than management specialists, several respondents commented on this question even though they thought major responsibility for subject matter had been assigned specialists in farm and in home management. Some of these comments follow:

> "You cannot, however, apply management and ignore other subject matter. The farm and Home management specialists have not ignored other subject matter."

> "The management specialist if he does a good job is fully aware of contributions other subject-matter specialists make. And I think have encouraged agents to draw on these other specialists."

> "Much more responsibility has fallen on farm management specialists than on home management specialists because more agents have been working on this phase of the Program. In more recent stages of development other subject-matter departments have made greater contributions to training of agents engaged in the Farm and Home Management Program."

> "The management specialists have responsibility for helping other specialists see where they can contribute to the Program."

> "I can see this shifting to other subject matter areas. As the Program develops I can see other department specialists assuming more responsibility."

Knowledge of total number of counties in Program

The respondents were asked to indicate how many counties were in the Program in July 1959. Class intervals of 5 units each which started with less than 5 and ended with 50 and over were provided for indicating answers.

The distribution of the respondents according to the class intervals chosen follows:

No. of counties	No. of respondents checking given class intervals
15 - 19	1
25 - 29	9
30 - 34	9
Total	19

The actual number of counties conducting programs in July 1959 was 29. Thus 9 of the respondents chose the correct class interval and 9 others selected the class interval whose limits are closest to 29.

The respondents were also asked to indicate by choosing among class intervals of 5 units which began with less than 5 and ended with 50 and over in how many counties the home demonstration and agricultural departments were cooperating in conducting the Program in July 1959. The numbers selecting different class intervals follow:

No. of counties	No. of respondents checking given class intervals
Less than 5	2
5 - 9	4
10 - 14	9
20 - 24	2
25 - 29	2
Total	19

As of July 1959 there were actually 12 counties in which the agricultural and home demonstration departments were cooperating in the Program. Nine of the respondents checked the 10 - 14 interval in which the exact number of counties falls. However, 2 chose less than 5 and 2, 25 - 29. The confusion about number of counties in which the 2 departments are cooperating arises from the irregularity of the home demonstration department's participation. This irregularity of participation has occurred largely because of difficulties in staffing the work.

Knowledge of characteristics of participants

The administrators, supervisors, and specialists indicated what they thought about 4 characteristics of the families participating in the Program. The following tabulation gives their views:

Characteristics of participants	True	False	Didn't know	Total
Primarily clients of the agricultural department	18	-	1	19
Mostly dairy farmers	18	-	1	19
Mostly low-income farmers	1	18	-	19
Mostly young farmers (under 35)	1	13	5	19

Most of the information which is available on the participants supports the views which a large majority of respondents held regarding each of these 4 characteristics.[1]

Several of the respondents commented in connection with their reactions to the statements as to the characteristics of participants. Some of these comments follow:

Are primarily clients of the agricultural department

"In some counties this is less true than formerly - i.e., farmers are working with Extension in the Farm and Home Management Program who had not previously been members of agricultural department." (Respondent's answer was "true".)

"I think we defeated the basic purpose of the Program not getting outside clientele in part. Farmers in it are the smart ones and not ones could benefit most." (Respondent's answer was "true".)

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[1] James W. Longest and Frank D. Alexander, Evaluation Study of Farm and Home Management Program in New York State, Adequacy of Sample and Control Group with Statement of Study Design, Report No. 1, Office of Extension Studies, State Colleges of Agriculture and Home Economics, Cornell University, Ithaca, N. Y., May 15, 1958, pp. 12, 15, 17, and 18.

Are mostly dairy farmers

"One would expect this since majority of New York Farmers are dairy. We have had less previous experience in conducting this type of work with other types of farmers." (Respondent's answer was "true".)

"Roughly same proportion of total dairy farmers in the state are participating as are fruit farmers or perhaps other types." (Respondent's answer was "true".)

"Dairy farmers predominate in all agricultural programs, plus it is harder to work with other type of farmers, lack of experience with mostly." (Respondent's answer was "true".)

Are mostly low-income farmers

"My observation leads me to believe they are better than average farmers but usually have substandard management problems which are often financial in nature." (Respondent's answer was "false".)

"Some that I know and hear about are among the association directors and are not what I'd classify as low income." (Respondent's answer was "false".)

"In order for the Program to have some degree of success the "better" farmers with higher incomes were drafted." (Respondent's answer was "false".)

"There has been a tendency in many counties for the same cooperators as already had to participate and these have been the progressive (non low-income) farmers." (Respondent's answer was "false".)

"I believe that the 'good' managers have been more aware of seeking further help to assist with management decisions." (Respondent's answer was "false".)

Are mostly young farmers (under 35)

"I think there are more young farmers in present Program than in the 1956, 1957, and 1958 groups." (Respondent's answer was "don't know".)

Knowledge of functions of College Steering Committee

A College Steering Committee for the Farm and Home Management Program was established in the early part of 1955. The respondents were asked to check on a list of 7 functions which they thought the committee was performing at the present time. According to the data of Table 1, there is fairly high consensus among the 19 respondents that the committee's functions are: 1) planning training for agents in the Program, 2) advising the Director concerning progress of the Program, and 3) evaluating the Program. Ten individuals thought the committee "advised the Director concerning operations of the Program." Since this function could be considered to overlap with "advising the Director concerning progress in the Program" and also appeared last on the check list, this may account for the fact that only 53 per cent of the respondents checked it as a committee function.

Table 1. Distribution of the 19 Respondents According to Their Knowledge of the Functions of the Farm and Home Management Steering Committee.

Functions	Thinking yes	Thinking no	Total*
	Per cent		
Planning training for agents in Program	100	--	100
Advising Director concerning progress in Program	84	16	100
Evaluating the Program	68	32	100
Advising the Director concerning operations of Program	53	47	100
Helping agents plan county programs	21	79	100
Dropping counties from Program	5	95	100
Approving county contracts	--	100	100

* For each function 100 per cent = 19 respondents.

Perhaps the nearest approach to an indication of the correct answer to this question is to be found in the views of the chairman of the committee.

It was his opinion that the functions of the committee included: 1) planning training for agents, 2) advising the Director concerning progress in the Program, 3) evaluating the Program, and 4) advising the Director concerning Program operations. It appears, therefore, that a good majority of the respondents agreed with the chairman of the committee on 3 functions and at least a majority on a fourth function.

Knowledge of and consensus about functions of college Extension staff groups

The knowledge of the respondents respecting 13 possible functions of various college Extension staff groups was asked for in the questionnaire.[1] For administrators, state leaders of agriculture, state leaders of home demonstration, the home demonstration agent-at-large, farm management specialists, and home management specialists, the 6 staff groups generally recognized as having responsibilities for the Program, it was possible to indicate correct answers to this question. Each person in each of the 6 groups was asked to indicate for his group the function that he actually performed, not what functions he thought his group had performed. If one person out of a given group performed a specific function then the correct answer was "function performed" but if no person in a given group indicated that a specific function was performed then the correct answer for that function was "no performance". Under this procedure in the count of those who indicated what they thought they knew about the functions of a group the members of that group were excluded. The tabulation that follows indicates the number of functions out of a total of 13 which 75 per cent or more of the individuals from 5 of the groups knew the correct answer (either "function performed" or "function not performed") for each group listed.

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[1] The 13 functions are: 1) developing original Program policy, 2) planning of formal training of agents, 3) formal training (conferences) of agents, 4) approving county participation agreements, 5) approval of agents' programs and plans of work, 6) reviewing agents' programs and plans of work, 7) preparing agents' programs and plans of work, 8) preparing subject-matter materials and teaching aids and tools, 9) conducting meetings with agents, 10) visiting farm families with agents, 11) conducting tours with agents, 12) conducting farm walk with agents, 13) advising agents on Program problems.

Staff group	No. of functions on which 75% or more of the other 5 groups knew the actual function of this group*
1. Administrators (Director and Assistant Director)	10
2. Farm management specialists	10
3. Agricultural state leaders	8
4. Home demonstration state leaders	8
5. Home demonstration agent-at-large	8
6. Home management specialists	7

* Each figure in this column should be related to a possible total of 13. The persons in each staff group listed were excluded in arriving at the per cent who knew the actual functions. The method used was to let the answers which the individuals in each group gave as to their actual behavior serve as the correct answer by which those in other groups were judged. This exclusion of these persons in each group when per cent of agreement was being calculated resulted in the following number of persons whose knowledge of the functions performed by each group was being tested: group 1 - 17; group 2 - 16; group 3 - 14; group 4 - 12; group 5 - 18; and group 6 - 18.

The respondents' knowledge of functions performed was best for the farm management specialists and for the administrators with 75 per cent or more of them knowing what these 2 groups of the staff did with respect to 10 out of 13 functions. For the other 4 groups the number of functions on which 75 per cent or more knew what these groups did was either 7 or 8 out of a total of 13 functions.

For 9 other groups of the college Extension staff the respondents indicated what they thought these groups had done with respect to the 13 functions. Since these staff groups were not included in the survey because it was generally recognized that they were only marginally associated with the Program, indication by their members of functions actually performed could not be used as the basis for "correct answers". The tabulation which follows, therefore, gives an indication of the consensus of the 19 respondents with respect to number of functions (out of 13) which they thought these 9 groups have or have not performed:

Staff groups	No. of functions out of 13 on which 74% or more of respondents agreed as to whether performed or not performed
Clothing and textiles specialists	8
Child development and family relationships specialists	7
Food marketing specialists	7
Food and nutrition specialists	6
Housing and design specialists	6
Poultry specialists	5
Agricultural engineering specialists	4
Agronomy specialists	4
Dairy (animal husbandry) specialists	3

In general the respondents have only a moderate degree of consensus. The highest number of functions on which 74 per cent or more agreed as to performance or nonperformance was 8 for the clothing and textile specialists. The lack of agreement on the functions in the Program for these 9 groups of specialists is related essentially to slightly ambiguous definition as to the limits of the Program which presents the question as to when a specialist is working on the Program.

In relationship to the matter of the role of specialists in the Program, the respondents were further asked to indicate whether or not they thought specialists in subject-matter fields other than farm and home management had participated in the Program in a limited manner. Seventeen of the 19 thought the participation of specialists other than those in farm and home management had been limited.

Comments made by those who thought that other than management specialists had participated in only a limited manner were:

> "They have participated indirectly more than most of them realize - in other meetings or general meetings; these specialists have helped to point out solutions to problems uncovered by the Program."
>
> "I think that some subject-matter departments have supported the Program through management specialists and some directly. What I don't think is appreciated is that the subject-matter departments had already made their big contribution when they trained agents before they went to work on Program."
>
> "The other specialists have contributed greatly individually through regular Extension meetings and through agent training not specifically farm and home management training."
>
> "Some more participation in recent stages than in earlier stages."
>
> "These specialists have participated when so requested."
>
> "I think this was our decision. Program to be in realm of management and only so far as related to management were they expected to participate."

These comments generally seem to emphasize that specialists from other than the management fields have contributed to the Program - often more tham might be recognized.

Consensus about Program objectives

Fifteen, or 78 per cent, of the 19 respondents thought the objectives cof the Program as it was being conducted in the latter half of 1959 had not beeen changed from the original ones which were set up at the beginning of the Proogram. Two individuals thought the objectives had changed and 2 did not know.

The 2 respondents who thought the objectives had changed commented as follows:

> "I really think the things we set out to do, to be coordinated, is impossible and it has degenerated into 3 programs," and
>
> "The emphasis has changed to be more farm management than farm and home management. Some have lost sight of the fact that this is an experimental program to gain knowledge that will be helpful in conducting the regular Extension program."

In order to secure a less generalized answer regarding change in objectives, the staff members were asked to indicate for 4 specific objectives contained in the original policy statement of the New York Farm and Home Management Program whether or not each statement was: 1) as stated still a part of policy, 2) modified some but still a part of policy, and 3) no longer a part of policy. The 4 policy objectives and the distribution of the respondents' answers for each according to the 3 choices listed above plus a do not know category appear in Table 2. On 3 of the 4 objectives the per cent of respondents is higher for no change than was the average per cent (82) who generally thought there had been no change in all 4 objectives.[1] On the objective, "to put plan to work on the farm and in the home", the per cent (78) was lower than the per cent (82) who generally thought there had been no change in objectives.

Among these administrators, supervisors, and specialists there is a high degree of consensus that the objectives of the Program have not changed. This consensus probably involves the best approximation to the correct answer that is

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[1] The per cent who generally thought there had been no change was calculated by adding together the number who checked each of the 4 objectives and dividing this sum by 4 times the 19 respondents.

Table 2. Number and Percentage Distribution of Respondents According to Opinions Respecting Change in Original Policy Objectives.

Objectives in Original Policy Statement		As stated here still a part of policy	Modified some but still a part of policy	No longer part of policy	Do not know status of	Total
To carefully analyze the situations confronting them and to re-examine their present and potential productive resources and the way they use these resources in relation to their goals and aspirations.	Number	17	2	-	-	19
	Per cent	89	11	-	-	100
To clarify the various alternatives the family has in the use of its resources, and to help the individuals to think through these alternatives in terms of their consequences	Number	17	2	-	-	19
	Per cent	89	11	-	-	100
To make sound decisions following analysis of alternatives and consequences, and to develop plans to carry out the decisions	Number	15	3	-	1	19
	Per cent	79	16	-	5	100
To put the plan to work on the farm and in the home	Number	13	4	-	2	19
	Per cent	68	21	-	11	100

available and agrees with the opinions of the research staff conducting the evaluation study of the Program.

Before being asked to react to the 4 specific objectives quoted from the State's original policy statement on the Program, the respondents were asked to write out what they thought were the main objectives of the Program. The most frequently occurring ideas contained in the statements were:

	No. of mentions
Attaining family goals and values	11
Study or analysis of situation or resources	9
Developing decision-making ability	7
Consideration of best use of resources	7
Evaluation or determination of alternatives	5

In addition to these 5 ideas, some 18 other ideas were found in the statements but none of them occurred more than twice and most of them were mentioned only once. The fact that the list of ideas (objectives) is fairly long does not necessarily mean lack of consensus; rather the various respondents simply listed aspects of Program objectives which seemed important to them. The 5 most frequently occurring ideas (objectives) listed above are also embodied in the first 3 specific policy objectives listed in Table 2. This would suggest that even when the respondents are given an opportunity to respond to open-end questions, the verbalizations show considerable agreement with 3 out of 4 of the basic objectives appearing in the original policy statement of the Program.[1]

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[1] Although the open-end question asking for the main objectives of the Program came before the question containing quotes from the State's original policy statement of the Program, this agreement may have resulted in part from their having been influenced by the quotes.

Consensus about cost of Program

The respondents were asked what they thought about the cost of the Program in relation to number of families participating. It was indicated to them there were approximately 1650 participants in the Program in 1958. The views of the respondents were as follows:

Cost	Number
Very high	9
High	8
Normal	1
Do not know	1
Total	19

If the 2 categories very high and high are combined a high degree of consensus exists among the respondents with respect to the cost of the Program. Seventeen of the 19 respondents consider the cost of the Program in relation to the number participating as either high or very high. Since the respondents were not asked whether or not they thought the costs were justified, no inference to this effect can or should be made. It should be observed, however, that consensus is fairly high among the respondents that the Program is important enough to justify one agricultural agent full-time in a county with a staff of 3 agents (see page 42).

Views about Program subject matter

Teaching of decision-making steps

The lack of agreement among the 19 respondents with respect to the steps in decision-making has been discussed. The respondents were also asked to give

3

their opinions as to whether or not in teaching decision-making it is necessary that those taught should learn the steps in the decision-making process. Fifteen of the 19 thought those being taught should learn the steps. Two did not think it necessary, and 2 did not know.

A few of those who thought it necessary to teach the steps in decision-making commented as follows:

> "I think we tend to teach process without identifying the steps."
>
> "But I feel strongly that this should be tied to subject matter."
>
> "I feel that the learning is better if the learner knows the 'why' of each step and knows he has taken each one."
>
> "If there is to be a carry-over, that is, most people need to know what they did in order to avoid 'hit and miss' decisions in the future."

One who thought it unnecessary to teach the steps in decision-making commented:

> "Debatable - I'd say more important to help them 'do' than to learn steps - forming the habit of 'doing' the process brings results."

Broad definition of Program subject matter

To discover what the administrators, supervisors, and specialists thought broadly about the subject matter that agents working in the Program should include, they were asked to check which of 4 broad definitions of subject matter in working with individual families they would choose. An opportunity was also given the respondent to add his own definition. The following tabulation indicates the choices which were made:

Subject matter	Number checking
1. Teach the management process - including records, their analysis, and how to make managerial decisions, and help also with any pressing problems to which families are seeking an immediate answer such as seed selection, rotation, breeding, kitchen management, or barn remodeling	8
2. Identify some pressing problem and use it to teach the management process, including records, their analysis, and how to make managerial decisions	6
3. Combination of 1 and 2	2
4. Combination of 1 and 2 with the addition: "Guide families to obtain specific information and help the family weigh alternatives, guiding them to consider the overall picture including the financial situation and their own goals. It is important to teach how records are useful in determining present use of resources. (The mechanics of keeping records does not necessarily have any relation to management.)"	1
5. Combination of 1, 2, 7 and 8 with qualifications for 7 - "if other agents can meet other needs" and for 1 and 8 - "if other agents not available"	1
6. Only to get experience and confidence to help all families make better decisions	1
7. Teach the management process only - including records, their analysis, and how to make managerial decisions	0
8. Help families with special problems as remodeling house or barn, seed selection, rotation, breeding and incidentally teach some management	0

Teaching the managerial process in combination with help on pressing problems is the most frequently chosen definition with 8 respondents making this choice. Six chose identifying some pressing problem and using it to teach the management process. The tabulation does not reveal any marked consensus on definition of the broad area in which agents should operate. It should be admitted, too, that the structured answers are weak in that it is very difficult, if not impossible, to describe a job definition in the brief manner attempted by the statements contained in the check list.

ADDENDUM

Report No. 3, page 28.

A footnote index (*) should follow the tabulation heading, Subject matter.

Directly under the tabulation the following footnote should be added:

*Items 1, 2, 7, and 8 were the broad definitions listed in the questionnaire.

Subject-matter emphasis

Using a scale of 1 to 5 with 5 being highest, the respondents were asked to rate the emphasis that should be placed on 29 different subject-matter areas. The 6 areas which were rated highest (weight of 5) by 74 per cent or more of the 19 respondents are (see also Table 3):

Subject-matter area	No. of respondents rating 5
Decision-making	17
How to summarize farm business for year	16
Analysis of farm records	16
Business goals	15
Farm business record keeping (cash account and farm inventory)	15
Family goals	14

A seventh area which was rated highest (weight of 5) by more than half (12) of the respondents was how to relate farm and family financial situation.

If those rating subject-matter areas either 4 or 5 are combined and a weighted score given to each the list in rank order for those areas with a score of 60 or more is:

Subject-matter area	Weighted score[1]
Decision-making	85
Analysis of farm records	84
Farm business record keeping (cash account and farm inventory)	83
Business goals	83
Family goals	82
How to summarize farm business for year	80
How to relate farm and family financial situation	76
How to plan adjustments in family spending	70
Keeping net worth statement	69
How to evaluate fixed obligations	61
Analysis of work load in homemaking	60

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[1] Weighted scores were obtained by adding the product of number of respondents rating an area 4 times that value (4) to the product of number rating an area 5 times that value (5). The highest possible score is 85.

Table 3. What Should be the Emphasis in the Farm and Home Management Program on Each of the Following Subject-matter Areas.

Subject-matter areas	Per cent distribution of respondents according to assignment of importance rating (5 highest)								Total*
	0	1	2	3	4	5	Don't know	No info.	
Decision-making		5				90	5		100
How to summarize farm business for year			5	5		85	5		100
Analysis of farm records			11		5	84			100
Business goals		5			11	79	5		100
Farm business record keeping (Cash acct. & inventory)			11		11	78			100
Family goals		5	5		16	74			100
How to relate farm and family financial situation		5	5	5	21	64			100
How to plan adjustments in family spending		11	5	5	26	53			100
How to evaluate fixed obligations		5		26	21	48			100
Keeping net worth statement		11		11	31	47			100
Analysis of household records		5	5	26	16	43		5	100
Analysis of work load in homemaking		5		26	26	43			100
Relation of off-farm income to total income		16		16	21	42		5	100
Keeping record of payments to be made		11		11	31	42	5		100
Household records (home acct. and inventory)		11	11	16	26	36			100
Summarize family living outlay		4	16	16	32	32			100
Partnership arrangement		5	5	27	27	31	5		100
Nonfarm occupations		26	16	26		16	16		100
Culling of herd	16	11		46		11	11	5	100
Kitchen arrangement	5	21	21	26	11	11	5		100
Remodeling entire home	5	27	21	16	21	5	5		100
Soil testing	11	21	5	36	11	5	11		100
Fertilization	11	21	11	41		5	11		100
Seed selection	16	21		49		5	11		100
Harvesting of forage	11	21	11	41		5	11		100
Rotation of crops	16	16	5	42	5	5	11		100
Breeding of dairy cows	16	16	11	41		5	11		100
Disease of dairy cows	16	21	5	42		5	11		100
Feeding of dairy cows	11	21	5	42	5	5	11		100

* For each subject-matter area 100 per cent = 19 respondents

The degree of consensus around subject-matter areas that are essentially managerial and economic with first priority on the farm business which these lists reflect are strong evidence that in the thinking of administrators, supervisors, and specialists the Farm and Home Management Program should be oriented in this direction. The reverse side of this is the extent of lower ratings given to subject-matter areas in agriculture that are less managerial and financial in the narrow sense of their subject-matter content. Such subject-matter areas are soil testing, fertilization, seed selection, harvesting of forage, rotation of crops, breeding of dairy cows, feeding of dairy cows, and culling of herd. Similarly the reverse side is shown in the extent of low ratings given such home economic subject-matter areas as kitchen arrangement and remodelling entire house.

Views about Program methods

Distribution of participating agents' interests

The following tabulation shows how the 19 respondents thought an agent working on the Program should distribute his or her interests:

Interests	No. of respondents	Per cent of total (19)
1. Farm and home management with minimum of other Extension responsibilities	12	63
2. Farm and home management with a number of other Extension responsibilities	3	16
3. Farm and home management exclusively	2	11
4. Farm and home management with one other Extension responsibility	1	5
5. No information	1	5
Total	19	100

Almost two-thirds of the 19 thought agents should have the farm and home management assignment with a minimum of other Extension responsibilities. The highest per cent (but only 38 per cent) of 39 agricultural agents participating in the Program in 1958 also favored this type of assignment, but the largest per cent (50) of home demonstration agents favored farm and home management with one other strong Extension responsibility.[1]

Some comments made by respondents on this matter of assignment follow:

Favoring assignment no. 1 in above tabulation

"Exclusive emphasis isolates the Program more than I think it should be."

"There would seem to be no one best answer. Much depends on the agent, the county, stage of Program development. Is something to be gained by having agent have some other responsibilities? Helps insure integration of Farm and Home Management with entire Extension program."

Favoring assignment no. 3 in above tabulation

"Because of original policy agent working on this should stick with Farm and Home Management to exclusion of all other programs."

Favoring none of the 4 assignments (appears as no information in above tabulation)

"This assignment should be done on a type of farming basis and absorbed into regular Extension program."

Length of time participants should remain in Program

The following tabulation gives a distribution of the 19 respondents by number of years they thought families should generally remain in the Program:

Years	No. of respondents	Per cent
3	10	53
3 - 4	1	5
3 - 5	2	11
Don't know	6	31
Total	19	100

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[1] Frank D. Alexander and James W. Longest, Evaluation Study of Farm and Home Management Program in New York State, Study of the Operation of the Farm and Home Management Program in New York State, Report No. 2, Office of Extension Studies, State Colleges of Agriculture and Home Economics, Cornell University, Ithaca, New York, January 15, 1959, pp. 56a and 85.

Ten, or 53 per cent, of the 19 respondents thoguht 3 years was about the number of years families should remain in the Program. This per cent (53) is fairly close to the 63 per cent of agricultural agents (39) in the Program in 1958 who thought 3 years about right. The highest per cent (37) of home demonstration agents (11) also held this same point-of-view. It should be noted, however, that 6, or 31 per cent of the 19 respondents indicated that they did not know the number of years families should remain in the Program. Sixteen per cent of the agricultural agents in 1958 did not know or would give no specific number of years. Of the 11 home demonstration agents 27 per cent would give no specific number of years in 1958.[1]

Several of the 19 respondents who stated specific time periods did so with reservations as indicated in their written comments. Some of the comments of those who didn't know how long families should remain in the Program are as follows:

> "Some families will need help longer to fully grasp the management concepts."
>
> "Depends on their progress and need for Program."
>
> "Some danger in formalizing length of time."

Working relationship of agricultural and home demonstration agents

A list of 13 principles or guides for effective cooperation of an agricultural agent and home demonstration agent working in the Program in the same county was developed from a case study of what was considered by several Extension workers to be one of the best cooperative teams in the state. The respondents were asked to indicate on this list the items which they considered important for effective cooperation of the 2 agents.

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[1] Ibid., pp. 46 and 81.

Two of the 13 items were checked as important by all 19 of the respondents, 3 by 18, and one by 16. The 13 items arrayed in order of the number indicating them as important follows:

Principle or guide	Number of respondents considering important
1. Each of the 2 agents understands clearly what the other is attempting to do in the Program	19
2. While the agricultural agent will be primarily responsible for the farm management phase of the Program, in working with a family the agricultural agent will try to interest the husband in the home phase of the Program and will work with the wife, home demonstration agent, and the husband on that phase of the Program	19
3. In group meetings both husbands and wives will be kept together with each agent taking the teaching role for which he or she is best adapted	18
4. Joint visits will be undertaken on a selective basis in the light of each particular case	18
5. The 2 agents will jointly evaluate their work from time to time	18
6. Each family upon entering the Program is told that both an agricultural and home demonstration agent will be working with it	16
7. While the home demonstration agent will be primarily responsible for the home management phase of the Program, in working with a family the home demonstration agent will try to interest the wife in the farm operations and will work with the husband, the agricultural agent and the wife on that phase of the Program	15
8. The 2 agents will prepare contact notes on each farm and home visit, each one supplying the other with a copy of these notes	13

	Principle or guide	Number of respondents considering important
9.	The 2 agents will spend at least an hour a week in discussing Program	12
10.	The 2 agents will recognize that most particpants are likely to be clients of the agricultural department and that the home agent may have to bide her time before getting some of the homemakers interested in the home phase of the Program	10
11.	The 2 agents will travel together when making joint visits	8
12.	The 2 agents will prepare a joint annual report which will go to their respective state leaders	4
13.	Where it is possible, the 2 agents will occupy the same office	1

Four of the 13 items were checked by about half (10) or less of the 19 respondents. One item, where it is possible, the 2 agents will occupy the same office, was indicated as important by only one individual. This item might have been considered important by more of the respondents if its' intent of spatial nearness for the purpose of facilitating communications had been better stated as "in adjoining offices" or "offices on the same floor". It is interesting that item 2 was rated important by 19 respondents but an almost identical item, except for the substitution of "home demonstration agent" for "agricultural agent", was considered important by only 15 of the respondents.

The following tabulation gives the number of respondents according to number of items rated important:

No. of items rated important	No. of respondents so rating
5	3
6	1
7	3
8	3
9	2
10	3
11	2
12	2
Total	19

No respondent considered all 13 items important but 2 thought 12 of them important

Four of the respondents added one item each to the list. These are:

"Agents may visit families singly for specific purposes but reports to other so each knows his or her part of plan."

"The 2 agents will recognize that some of the homemakers will not at any time be interested in a home phase of the Program."

"Understanding each other's potential contributions and encouraging families to go where help is available."

"Bear and forbear on part of the 2 agents."

In general the consensus of the respondents with respect to these principles or guides for cooperative work of the agricultural agent and home demonstration agent assigned to the Program in a county is fairly high.

Views about training of agents for the Program

Subject matter that should be taught

The respondents were asked to indicate on a list of 29 subject-matter areas (with an opportunity for adding others) those in which they thought agents working in the Farm and Home Management Program should have special training. For each of the 29 areas the per cent of respondents who thought the agricultural agents should have training therein was calculated. In the tabulation below the subject-matter areas are arrayed from highest to lowest per cent with each per cent for agricultural agents accompanied by a similar per cent for home demonstration agents.

Subject-matter area	Per cent of respondents thinking each class of agent should have special training in given subject-matter areas	
	Ag. agents	H.D. agents
Counseling techniques	100	100
Analysis of farm records	95	26
Economic trends	95	95
Farm record keeping	95	47
Management process	95	95
Family goals and values	89	89
Small group teaching	89	89
Working relations of agricultural and home demonstration agents in Program	89	89
Decision-making	84	89
Exchange of agents' experiences	79	79
Partnership arrangements	79	47
Budgeting for farm business	74	47
Credit	74	68
Land economics	68	21
Insurance	63	63
Budgeting for family expenditures	58	89
Agricultural engineering	42	--
Agronomy	37	--
Animal husbandry	37	--
Fruits and vegetables	37	--
Consumer education	32	53
Housing and design	32	42
Poultry	32	--
Analysis of household records	26	100
Child development and family relationships	26	47
Homemakers' use of time	26	95
Household record keeping	26	89
Food and nutrition	11	42
Textiles and clothing	--	42

Over half or more of the respondents would include 16 of the 29 subject-matter areas listed as areas in which agricultural agents in the Program should have special training. For half of these 16 areas, the per cent of respondents who would include them ranges from 89 to 100. These 8 areas are in order: counseling techniques, analysis of farm records, economic trends, farm record keeping, management process, family goals and values, small group teaching, and working relations of agricultural and home demonstration agents in the Program. Three of these areas are concerned with methodology, i.e., counseling techniques, small group teaching, and working relationships of agricultural and home demonstration agents. The percentages of respondents who think home demonstration agents should have special training in these 3 areas of methodology were identical with the percentages for agricultural agents.

For several areas of subject matter, the percentages of respondents thinking both agricultural and home demonstration agents should have special training therein are identical or almost so, and at the same time the percentages are fairly large. These areas are economic trends, management process, family goals and values, and decision-making.

The agreement of the respondents with the managerial-economic orientation of the Program is reflected in the fact that the percentages of those who think agricultural agents should have special training in those areas relating to farming that normally belong to the managerial-economic field are large as are the percentages thinking home demonstration agents should have special training in the managerial-economic areas of homemaking. On the other hand the percentages drop sharply for training for agricultural agents in subject-matter areas such as agricultural engineering, agronomy, animal husbandry, fruits and vegetables, and poultry and for home demonstration agents in areas such as child development and family relationships, food and nutrition, housing and design, and textiles and clothing.

The respondents are in agreement that agricultural and home demonstration agents should have special training in a number of subject-matter and methodological areas that can be logically associated with the joint operations of the 2 groups of agents. (See paragraphs 2 and 3 of this section.) However, assuming the full implications of a farm and home management program, for at least 4 subject-matter areas in which special training for both agents might well be undertaken there is lack of agreement. These areas are budgeting for farm business, farm record keeping, budgeting for family expenditures, and household record keeping.

Amount of agent training in future

A majority (11)of the 19 respondents thought that training conferences for agents who have worked in the Program 2 or more years should be conducted at about the same level as in the past (2 or 3 conferences per year). Seven of the 19, however, thought such training should be continued but the amount decreased. One did not know what should be done.

Evaluation of Program

Rating of methods used in Program

The 19 respondents were asked to rate 12 methods which have been used in the Program as to effectiveness at 4 levels, i.e., very effective, effective, slightly effective, ineffective and do not know.

The percentage distributions of the respondents according to very effective and effective ratings for each of the 12 methods follow:

Methods	Per cent of respondents (19) according to rating of method as	
	Very effective	Effective
Farm and home visits	74	26
Compare individual summaries with averages	37	37
Management conferences (kitchen)	32	63
Group meetings	26	58
Farm walks	21	48
Participants summarize farm record books	21	53
College summarizes farm record books	21	32
College publications on farm and home management	16	16
Participants summarize home record books	11	48
Tours	10	53
Letters and cards with seasonal reminders	--	37
Local newspaper articles	--	21

On only one method, farm and home visits, do the respondents show any high degree of consensus, with 74 per cent rating the method very effective. No other method was rated very effective by more than 32 per cent or 6 of the respondents. If the percentages rating the methods very effective and effective are combined, only 4 of the methods, i.e., farm and home visits (100 per cent), management conferences (kitchen) (95 per cent), group meetings (84 per cent), and participants summarize farm record books (74 per cent), were so rated by 74 per cent or more of the respondents. Three of the methods, i.e., letters and cards with seasonal reminders (37 per cent), college publications on farm and home management (32 per cent), and local newspaper articles (21 per cent)were rated as very effective and effective combined by 37 per cent or less of the respondents. Only one method, local newspaper articles, was rated ineffective by any noticeable number (4) of the respondents. For

5 of the 12 methods, from 4 to 6 of the respondents said they did not know how effective the methods were. These 5 methods, however, were ones that the respondents might be expected to know least about.

Amount of special training agents have received

When the 19 respondents were asked what they thought about the amount of special in-service training for agents in the Program in the past, 12 thought it was about right, 2 thought it had been underemphasized, one overemphasized, and 4 did not know.

Importance of Program in terms of county staff in-put

The respondents were asked to give their views of how important they thought the Program is by indicating for a county having a staff of 3 agricultural agents the amount of agent time that should be assigned to the farm management phase of the farm and home management approach. They were also asked to do the same for the home management phase in a county with a home demonstration staff of 3 agents.

Almost two-thirds of the respondents thought an agricultural department with 3 agents could justify 1 agent assigned full-time to the farm management phase of the approach (Table 4). There was much less consensus about the home management phase in terms of agent time. The highest percentage (42) of the respondents favored one agent part-time. Four of the respondents did not know how much agent time should be given to the farm management phase and 5 did not know this for the home management phase.

Table 4. Importance Attached to Program in Terms of Agent Time Assigned to the Program, Assuming a Staff of 3 Agricultural and 3 Home Demonstration Agents in a County.

Degree of importance	Farm management phase (agricultural department)	Home management phase (home demonstration department)
	Per cent of respondents (number = 19)	
To justify 2 or more agents full-time	--	--
To justify 1 agent full-time	63	31
To justify 1 agent part-time	11	42
Not important enough to justify 1 agent part-time	--	--
Do not know	21	26
No information	5	--
Total	100	100

The agricultural and home demonstration agents in the 1958 study of the operations of the Program were asked this question of importance of the Farm and Home Management approach in terms of agent time for their respective departments with their own county situation in mind rather than a 3 agent staff. Over two-thirds (64 per cent) of the 14 home demonstration agents (1 agent who worked in 4 counties counted 4 times) thought it justified one home demonstration agent full-time. This comparison shows the agricultural agents placing slightly more importance on the approach than administrators, supervisors, and specialists and home demonstration agents attaching considerably more importance to it.[1]

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[1] Ibid., pp. 62 and 89.

ERRATA

Report No. 3, p. 42.

Substitute for the next to the last sentence on the page the following two sentences

Over two-thirds (69 per cent) of the agricultural agents thought the approach justified one full-time agricultural agent and slightly less than two-thirds (64 per cent) of the 14 home demonstration agents (1 agent who worked in 4 counties counted 4 times) thought it justified one home demonstration agent full-time. Another 8 per cent of the former would use 2 full-time agents.

Remove from the last sentence (third line from bottom of page) the word "slightly".

Opinion as to importance various college Extension staff groups place on Program

The respondents were asked to indicate at which of 5 levels of importance they thought various Extension staff groups at the college would rate the Program. The percentages of respondents according to 2 levels of importance, i.e., very important and important, which they thought the 6 groups (only one person in one group) primarily responsible for the Program would attach to the Program are given in the following tabulation:

	Per cent of respondents (19) thinking group thinks Program	
	Very important	Important
Home demonstration agent-at-large	90	10
Farm management specialists	63	21
Agricultural state leaders	58	32
Director and Assistant Director	47	37
Home management specialists	32	53
Home demonstration state leaders	16	58

The home demonstration agent-at-large who was assigned to the Program and the farm management specialists are the ones who are considered by the administrators, supervisors, and specialists as considering the Program very important. The agricultural state leaders take third position for this level of importance. If the percentages for very important and important are combined, all of the totals are 74 or above.

In addition to the 6 groups mentioned above, the respondents were asked to give their opinions as to how important they thought 4 groups of agricultural specialists (other than farm management specialists) and 5 groups of home demonstration specialists (other than home management specialists) considered the Program. Very few of the respondents thought any of these groups considered the Program very important and for only 2 of the groups, i.e., housing and design and child development and family relationships, are the percentages of respondents thinking the groups consider the Program important above 50 per cent.

Ultimate place of Program in Extension work

A general question on methodology was asked, i.e., what kind of activity did the respondent think the present Farm and Home Management Program should ultimately become in a county Extension program. Three specific alternatives were offered and in addition an opportunity given to write in an alternative. The following tabulation gives the responses of the 19 individuals:

What become	No. of respondents	Per cent
1. Have about 60 participants with a new group each year and each family in Program for 3 years	6	32
2. Have about 25 participants per year whose records and experience with whom would serve to guide the agent staff in conducting and planning the regular Extension program	6	32
3. Should be dropped and forgotten	-	--
4. Other	7	36
Total	19	100

While no one thought the activity should be dropped and forgotten, there is no great amount of agreement as to future direction. Choices 1 and 2 were each selected by 6 respondents. The remaining 7 stated their own ideas as to what the Program should become. Their views are quoted below:

"I believe about 30-40 new (participants) each year with each group continuing for about 3 years."

"Should have much larger number of 'participants' than indicated above, in various 'stages' or with agent'cooperator relationships in varying degrees of intensity. 'Service' aspect should disappear after family has been inducted for some length of time - perhaps 2 or 3 years. Ultimate would be to have all Extension cooperators as participants."

"For larger counties (1) above, for smaller counties or more limited staffs probably (2). In any case the portion on 'used in planning regular programs' (2) should come in."

"Size depends - couldn't judge number of participants."

"I'd like to see home demonstration agents do intensive work with a few (less than 25) families - urban as well as rural each year to gain knowledge and experience that would guide staff in developing program."

"Should be integrated into all Extension teaching."

"(Become) an integral part of Extension program - special farm and home management meetings reduced to minimum; work intensively with 'enough' families to understand the inter-relationships of common problems confronting families."

Unique contributions of Program

The respondents were asked to indicate what they thought the Farm and Home Management Program offered that no other Extension activity can provide. A wide variety of statements were given in answering this question. The tabulation below attempts to give some of the major ideas appearing in the answers:

Major ideas about unique contributions	Number mentioning
1. Relating to overall approach	
Whole farm look for families	4
Help families objectively appraise situation	3
Overall analysis and appraisal of opportunities, goals and basis for decisions	2
Work on interrelated problems	1
Help families clarify goals	1
Provides opportunity for agent and family working together to clarify objectives, analyze resources, and make plans to utilize resources fully	1
2. Relating to work with individual family	
Work with individual family	4
First hand contact between farmer and homemaker and agents	2
3. Relating to management emphasis	
Management help for problems of individual farm family	2
Teach management	1
4. Relating to upgrading agents	
Opportunity for agents to learn how families manage	2
Provides in-service training for agents to work with many families without complete financial study of their operations	1
5. Nothing really (if planned for regular county program)	1

Ideas relating to "overall approach" (seeing the whole situation) are fairly prominent. If the general sense of the various statements is comprehended, there is perhaps more agreement among the respondents than may appear on the surface.

Influence of Program on county and state Extension work

The respondents were asked to state what they thought had been the influence of the Program on county Extension programs generally. A variety of ideas appeared in their answers. Only one idea was mentioned by any noteworthy number, i.e., more emphasis on management in program. From what is generally known about the influence on the Program at the county level this observation seems to have considerable validity. The ideas appearing in the answers of the 19 respondents with their frequency of mention are listed below:

Ideas as to influence of Program at county level	No. of times mentioned
More emphasis on management in programs	8
Agents more conscious of management	3
Influenced (strengthened) county program	3
Made better qualified agents	3
Gained new group of cooperators	2
Supplied information for use in total program	2
More emphasis on total approach	1
Gained more local respect for Extension programs	1
Brought agents and families closer together	1
Improved group process	1
Caused home demonstration to work with farm families	1
Better understanding between agricultural and home demonstration agents	1
Developed some new local leadership	1
Showed by example value of working with farm families	1
Reemphasized value of Extension's basic programs	1

The respondents were also asked to state what they thought had been the influence of the Program on Extension program at the state level. Again a wide variety of answers were given. The tabulation below presents the major ideas contained in the answers of the 19 respondents:

Ideas as to influence of Program at state level	No. of times mentioned
Role in overall management being learned by specialists	3
Caused specialists to take look at whole	3
More cooperation between agricultural (college) and home economics (college)	3
Same but less influence (not specific) than in counties	3
Helped to coordinate departments	2
Provided more facts for teaching	2
Experience from more direct work with families influencing other programs	2
Not much influence	2
Caused agricultural economics to improve its programs	1
Emphasized importance of county agent as generalist supported by specialists	1
Made specialists more aware of change in farming	1
More fundamental training in methods	1
Contributed to more objectivity in Extension programs	1
Encouraged preparation of new teaching materials	1
Learned management can only be taught to small groups of individuals	1
Influenced long-range program planning in home demonstration	1
Closer contact between state staff and families	1
Program direction toward management influenced by greater awareness of needs	1
Gained additional support for Extension	1
Do not know	1

There is no consensus around any one idea. Three important ideas were mentioned 3 times each, i.e., role in overall management being learned by specialists, caused specialists to take look at whole, and more cooperation between agricultural (college) and home economics (college).

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EVALUATION STUDY OF FARM AND HOME MANAGEMENT PROGRAM IN NEW YORK STATE

A CASE STUDY OF THE EDUCATIONAL EXPOSURE OF A SAMPLE OF 25 FAMILIES PARTICIPATING IN THE FARM AND HOME MANAGEMENT PROGRAM IN A COUNTY IN NEW YORK STATE

Report No. 4

Office of Extension Studies
State Colleges of Agriculture and Home Economics
Cornell University
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PREFACE

In the early training of agents who were to participate in the Farm and Home Management Program in New York State attention was given to methods of keeping records of the agents' contacts with participating families. Since the Program was designed for work with individual families which would involve teaching of an intensive and intimate character, it was thought that the contact records might be helpful to an agent in maintaining continuity of his efforts with individual families and would be especially useful in those instances where an agent working on the Program is replaced. It was also anticipated that these records would provide data for evaluation research.

It should be recognized that considerable self-discipline along with methodical habits is required for one to pursue the routine involved in keeping records of this type. In Oneida County, New York, Ralph Hadlock, associate county agricultural agent, assigned major responsibility for the county's Program, has kept contact records on each participating family during the entire period of the Program.

The data for this report were obtained from the contact records of a random sample of 25 of Oneida County's participating families. This sample of 25 families is part of a larger sample of 250 participants in 10 selected counties of the State which is being used in the over-all evaluation study of the Farm and Home Management Program. While 25 families is a small number, the findings, nevertheless, provide a unique description of the Program in Oneida County. It is hoped that those engaged in similar activities will find stimulating suggestions here and will be encouraged to experiment with the keeping of contact records as Mr. Hadlock has done.

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Summary

This is a case study of the educational exposure of a sample of 25 families in the Farm and Home Management Program in a county in New York State. The case studied is not representative of programs in New York counties but more nearly approaches a model or ideal type. Major emphasis in the study is on methods used and subject matter taught. The data are from family contact records kept by the agent who had major responsibility for the county's Program.[1] The period of time covered by these records was from January, 1955 to May, 1959.

Methods of conducting the Program

1. Eighty-four per cent of the 25 families included in the study were in the Program for at least 3 years. This time-span provided an opportunity for for continuity in teaching required for effective educational results. Such a time-span is especially needed for the complex subject matter of management which has been the major emphasis of the Program.
2. A reasonably long time-span of educational exposure such as most of the 25 families have had can hardly be effective unless contacts between teacher and those taught are fairly frequent. The variability in length of time of participation prevents the use of average number of contacts by agents with all 25 families. However, the average number of contacts with 19 families for which such a statistic could be determined was 18.4. Another figure that indicates frequency of contacts and which could be calculated for all 25 families is the average interval between contacts. This average was 1.9 months. Thus, not only had the families had a reasonably long span of

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[1] While the agent who was responsible for the Program in the county kept the contact records, from time to time he was assisted in conducting the Program by home demonstration workers.

educational exposure but they had also had fairly frequent contacts with their teachers.

3. For 19 families who were in the Program for at least 36 months the average number of contacts was 6.6 in the first 12-months period, rose to 7.2 in the second, and declined to 4.6 in the third. Although the differences in these averages is not especially large, the difference of 2 contacts between the average of the first 12 months and that of the third is sufficiently great to suggest that by the third 12-months some of the participants had probably gotten all they or the agent in charge of the Program thought was needed while others had lost interest. Another explanation for the decline in number of contacts in the third 12-months period was the increase in total number of participants in the county among whom the agent responsible for the Program had to divide his time.
4. The history of the agents' work in the Program is fairly well shown through their types of contacts with this sample of 25 families. The first 2 years of the Program were conducted principally through farm and home visits, but beginning with the third year group meetings were initiated on an extensive scale with a concentration of them in the first 3 months of the year followed by farm and home visits during the remaining months of the year. This same pattern occurred in the fourth year and was starting again the fifth year when the collection of data for the study was discontinued. Even though group meetings were introduced in an extensive way in the third year, farm and home visits continued to constitute 50 per cent of the contacts in that year and 38 per cent in the fourth year.
5. In the third and fourth years of the Program contacts between participants and agents were assuming a seasonal pattern with the largest number of

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Place a period after pattern in the last line on the page and cut these words following this period. "The largest number of contacts occurring" and substitute, "The largest number of contacts in the third year occurred".

contacts occurring in the first 3 months followed by a much smaller number of contacts in the 5 months from April through August and with both September and December having more contacts than any of these 5 months and both October and November having almost none. The fourth year generally repeated this pattern through September. The last 3 months of the fourth year had relatively few contacts as was true of the third year but these contacts were not in exactly the same pattern as in the third year.

6. For the average family two-thirds of the contacts with the agents were through farm and home visits and less than a third were through group meetings with the remainder being through office visits and letters. However, as the Program progressed contacts through farm and home visits declined greatly while contacts through group meetings increased rapidly until in the 12-month period (April, 1958-March, 1959) 50 per cent of all contacts were through group meetings.

Subject matter taught

1. A total of 58 different topics or classes of topics were considered in the 555 contacts between the agents and the 25 families. The average family was exposed to a little less than half of the 58 topics. However, only 9 per cent, or 5, of the topics were taught 51 or more times. This meant, however, that on the average each of the 25 families would have had about 2 exposures to 2 topics, 3 to 2 others, and 6 to another, all 5 of which were basically management topics or closely allied thereto.
2. In general the topics which were taught to large proportions of the families were the major subject-matter areas of farm management, housing being the one outstanding exception.

Relationship of subject matter to methods

During the year April, 1956 to March, 1957 group meetings were introduced on an extensive scale and continued through the 2 following years. In these 2 years the per cent of contacts through group meetings increased from 36 to 50. The per cent of exposures through group meetings to keeping farm and home records rose from 44 to 72, to analysis of farm business and family expenditures from 66 to 90, to agronomy from 26 to 66, and to all other subject matter from 24 to 29. This resulted in a greater concentration of teaching the keeping of farm and home records, the analysis of the farm business and family expenditures, and agronomy subject-matter items to group meetings while farm and home visits received a greater concentration of all other subject matter.

Implications

1. The over-all view of the teaching operation which is presented should give perspective to those involved in or planning similar activities.
2. The fact that the families spent a fairly long and continuous period in the Program with contacts reasonably well spaced is evidence that an agent who organizes his work can conduct a program at a high level of intensity.
3. The decline of contacts in what can be considered roughly the third 12-months of participation offers an important clue for setting limits on the time-span of participation in this type of program.
4. The historical development of the Program which the study presents culminates in a pattern of group meetings and seasonal activities that may be suggestive to those initiating similar programs or revising old ones.
5. The list of subject-matter topics which the families were taught provides helpful suggestions for agents in New York State who are seeking to strengthen their Farm and Home Management Programs.
6. The relatively small number of times individual families were taught topics which are primarily farm management or closely allied subject matter raises the questionas to whether a program as intensive as this one appears to be is sufficiently intensive at strategic points so that effective learning results.
7. As the Program progressed the trend toward the concentration in group meetings of subject matter basic to or closely related to management emphasizes the need for critical examination of what are the most effective methods for teaching families management and for helping them solve problems which are revealed through analysis of their farm and family situations.

A CASE STUDY OF THE EDUCATIONAL EXPOSURE OF A SAMPLE OF 25 FAMILIES PARTICIPATING IN THE FARM AND HOME MANAGEMENT PROGRAM IN A COUNTY IN NEW YORK STATE

Introduction

The Farm and Home Management Program in New York State is an educational activity in which the participating families have been fairly well identified over a period of time. This identification has provided the potentiality of isolating for study purposes the interaction of the families and the Extension agents who have worked with them. The research utilization of this potential, however, was dependent on the agents involved keeping records of their contacts with the participating families. In 2 of the 10 counties included in the longitudinal (1956-1960) evaluation study of the Farm and Home Management Program, the agricultural agents responsible for the Program have kept contact records on all of the participating families during the entire period of the Program. This report is based on an analysis of contact records of 25 families from one of these counties.[1] These 25 families are part of the random sample of 250 families included in the 10-county evaluation study. The time-span covered by these records is from January, 1955 to May, 1959. Since not all of the 25 families entered the Program at the same date and some had dropped out by May, 1959, the records for no family cover the entire period of 52 months. This report is a case study of the educational exposure of the 25 families with major attention to methods used and subject matter treated.

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[1] The data which this report uses from the agent's contact records include: 1) name of participant, 2)number of contact, 3) date of contact, 4) place, and 5) agent's notes regarding what was taught or discussed on each contact. While the agent who was responsible for the Program in the county kept the contact records, from time to time he was assisted in conducting the Program by home demonstration workers.

Methods of conducting Program

Length of participation with number of and intervals between contacts

The 25 families included in the report were participants for an average of 40.4 months, or about 3½ years (Table 1). The range in months of participation was from 15 to 51. Eighty-four per cent of the 25 families were in the Program from 35 to 51 months. Thus 21 of the 25 families had 3 or more years of contacts with the agents conducting the Program.

Table 1. Number and Percentage Distribution of 25 Families According to Number of Months in Program.

Number of months	Number of families	Per cent of families
15-24	2	8
25-34	2	8
35-44	11	44
45-51	10	40
Total	25	100

Average (mean): 40.4 months

This period of 3 or more years of participation would appear to provide the opportunity for continuity in teaching required for effective educational results, assuming contacts between the teacher and those taught are fairly frequent. The need for this continuity is especially important for teaching the complex subject matter of management which has been the major emphasis of the Program.

Because the number of months of participation by individual families varies considerably, the average number of contacts for all 25 families is not a significant figure. Accordingly, a distribution of number of contacts with a mean average is presented in Table 2 for the 19 families who were in the Program for 36 or more months. The number of contacts used in the table is the number which

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Insert in the sentence which begins on line 4 the word, "approximately" after the word, "had".

Add a footnote index (1) after "Program" in line 5. Then add this footnote at the bottom of the page, "1 Two of the 21 families participated for 35 months".

the family had with the agents during the first 36 months of participation. The average number of contacts for these 19 families was 18.4 with a range from 10 to 27.[1] (Table2) Forty-seven per cent of the 19 families had from 20 to 27 contacts.

Table 2. Number and Percentage Distribution of 19 Families Who Participated in the Program for 36 or More Months According to Number of Contacts During the First 36 Months of Each Family's Participation.

Number of contacts	Number of families	Per cent of families
10-14	6	32
15-19	4	21
20-24	6	32
25-29	3	15
Total	19	100

Average (mean): 18.4 contacts

Involved in the contacts with the families were the agricultural agent who had major responsibility for the Program, the home demonstration agent, temporarily employed home demonstration county leaders, and a home demonstration agent-at-large assigned to the Farm and Home Management Program on a state-wide basis. The 25 families had a total of 593 contacts with these 4 classes of Extension workers. Eighty-seven per cent of the total number of contacts were with the agricultural agent, 7 per cent with the home demonstration agent, 5 per cent with a home demonstration county leader, and 9 per cent with the home demonstration agent-at-large. In a number of instances both the agricultural agent and the home demonstration worker contacted families at the same time.

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[1] The average number of contacts for all 25 families was 22.2 with a range from 7 to 36.

The relatively small percentage of home demonstration contacts is the result of the irregular participation of the home demonstration department in the Program. This irregular participation resulted largely from difficulties in retaining home demonstration workers on the staff.

The average number of months between contacts is a useful figure for indicating frequency of contacts, and it can be used for all 25 families without any serious distortion of the situation being described. The average interval between contacts was 1.9 months. The agents were, therefore, contacting families about 6 times a year. (Table 3) The range in spacing contacts was from 1.3 to 2.7 months. While one-fifth of the families had from 1 to 1.5 months intervals between visits, another one-fifth had from 2.5 to 3 months. The nature of the problems of the families and their interests are important factors accounting for this difference in spacing of contacts.

Table 3. Number and Percentage Distribution of 25 Families According to Number of Months Between Contacts.

Number of months between contacts	Number of families	Per cent of families
1.00 - 1.49	5	20
1.50 - 1.99	8	32
2.00 - 2.49	7	28
2.50 - 2.99	5	20
Total	25	100

Average (mean): 1.9 months between contacts

Number of contacts by 12-months periods of participation for 19 families in the Program for at least 36 months

For the purpose of ascertaining the variation in number of contacts by successive 12-months periods of participation, the record of contacts of 19 of the families who had participated in the Program for at least 36 months was examined.[1] The average number of contacts of these 19 families with the agents was 6.6 in the first 12-months of participation, rose to 7.2 in the second, and declined to 4.6 in the third. (Table 4) Thus, while the average number of contacts during the first and second 12-months periods of participation differed slightly, a somewhat distinct decrease occurred in the third period. Only about one-fourth of the 19 families had from 9 to 12 contacts with agents in the first 12-months period, in the second period this rose to one-third, and declined to one-twentieth in the third. At the other end of the scale no family had as few as 1 to 2 contacts in either the first or second period, but 3, or 16 per cent, had this number of contacts in the third 12 months.

From these data it may be inferred that some of the participants had gotten all they thought was needed and others had lost interest by the third year. On the other hand the agent responsible for the Program may have concluded that some had received all they required and that intensive efforts with others were unnecessary because of loss of interest. Another factor affecting the decline in number of contacts in the third 12-months period was the increase in total participants among whom the agent responsible for the Program had to divide his time.

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[1] Only the first three 12 months periods for each family is used here, even though the family's participation may have extended beyond 36 months.

Table 4. Number and Percentage Distribution of 19 Families in Program for at Least 36 Months According to Number of Contacts by First, Second, and Third 12-Months Periods of Participation.*

Number of Contacts	First 12 months	Second 12 months	Third 12 months
		Number	
1 - 2	-	-	3
3 - 4	5	3	7
5 - 6	6	5	6
7 - 8	3	5	2
9 - 10	2	4	1
11 - 12	3	2	-
Total	19	19	19
		Per Cent	
1 - 2	-	-	16
3 - 4	26	16	37
5 - 6	32	26	32
7 - 8	16	26	10
8 - 10	10	21	5
11 - 12	16	11	-
Total	100	100	100
	Average (mean): 6.6	Average (mean): 7.2	Average (mean): 4.6

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* Only the first three 12 months periods for each family is used here, even though the family's participation may have extended beyond 36 months.

Total view of contacts with families over time and according to method of contact

Figure 1 gives a picture of the total history of the agents' contacts with the 25 families. As such it presents a picture of the evolution of the Program. In the first 2 years the agents did most of the work with the participants by means of farm and home visits. As experience in teaching the subject matter of management was gained it was decided in the interest of efficient use of time and teaching effectiveness to have the participating families meet in small study groups for several meetings held on successive weeks in the early part of the year.[1] So beginning in January and going through March of 1957, a concentraion of contacts through group meetings occurs. During the remaining months of 1957, contacts were essentially farm and home visits. Again in January, February and March of 1958, contacts through group meetings were quite concentrated followed almost entirely by farm and home visits in the remaining months of the year. The record of contacts ends with the fourth month of 1959, but for a third time, even though the number of active participants in the sample of 25 had declined sharply, group contacts were being concentrated in the early months of the year.

Unless studied carefully the graph (Figure 1) may be misleading with respect to the years 1957 and 1958. The percentages of contacts by farm and home visits, through group meetings, and by other means (office visits and letters) for 1957 and 1958 are given below:

	Per cent of contacts	
	1957	1958
Farm and home visits	50	38
Group meetings	48	56
Other means (office visits and letters)	2	6
Total	100	100

---

[1] In 1958 the average size of 10 active study groups was 6 families with a range from 3 to 9 families. The study groups have usually been held in the homes of members.

Thus in 1957 despite the introduction of group meetings, half of the agent's contacts with families were through farm and home visits. By 1958, however, this percentage had dropped to 38.

The graph also shows the seasonal character of the contacts. The first year (1955) may be dismissed for this consideration because it was a period of initiation and enrollment. In the second year (1956)contacts were almost exclusively farm and home visits and scattered throughout the year with 7 months - January, March, April June, August, October, and November - all having a number of contacts. Group meetings were initiated on a wide scale in the third year (1957). The first 3 months of the year had the largest number of contacts (a large proportion of which were in group meetings) with a much smaller number of contacts in the 5 months from April through August. Both September and December had more contacts than any of these 5 months but October had only one and November none. In the fourth year (1958) the 1957 pattern was generally repeated through September with the last 3 months of the year having relatively few contacts but not in the 1957 pattern for these months.

The average (mean) per cent of all contacts with 25 families which were farm and home visits was 60.3 per cent with a range from 33.3 to 100 per cent (Table 5). The average (mean) per cent of all contacts which were through group meetings was 37.4 with a range from 17.6 to 66.7. Thus on the average almost two-thirds of the contacts of the agents with these families was through farm and home visits and slightly more than a third were through group meetings. The other 2 types of contacts on which records were kept, namely, office visits and letters were relatively unimportant. It is possible, however, that some letters, particularly form letters, may not have been recorded as contacts by the agent.

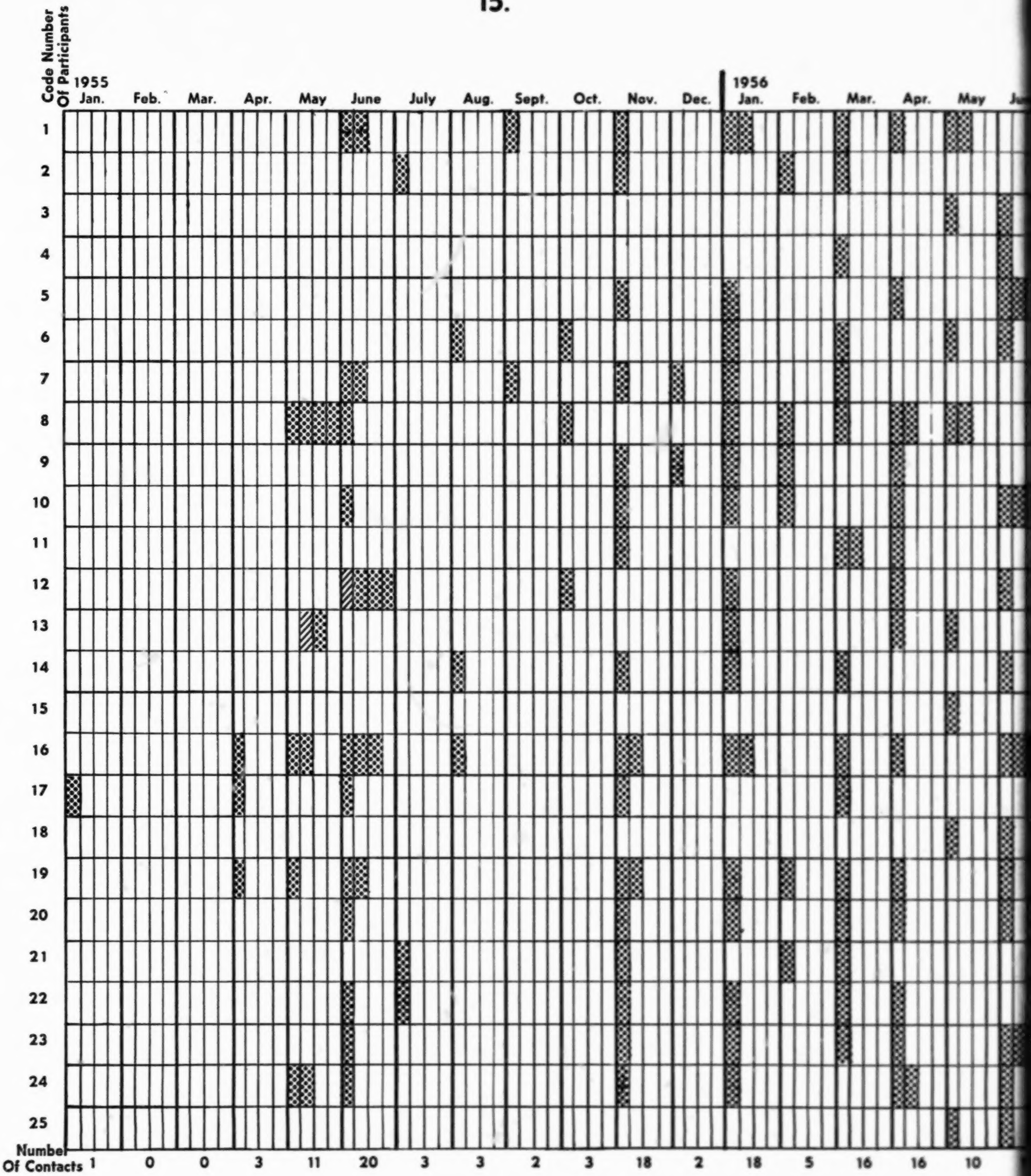
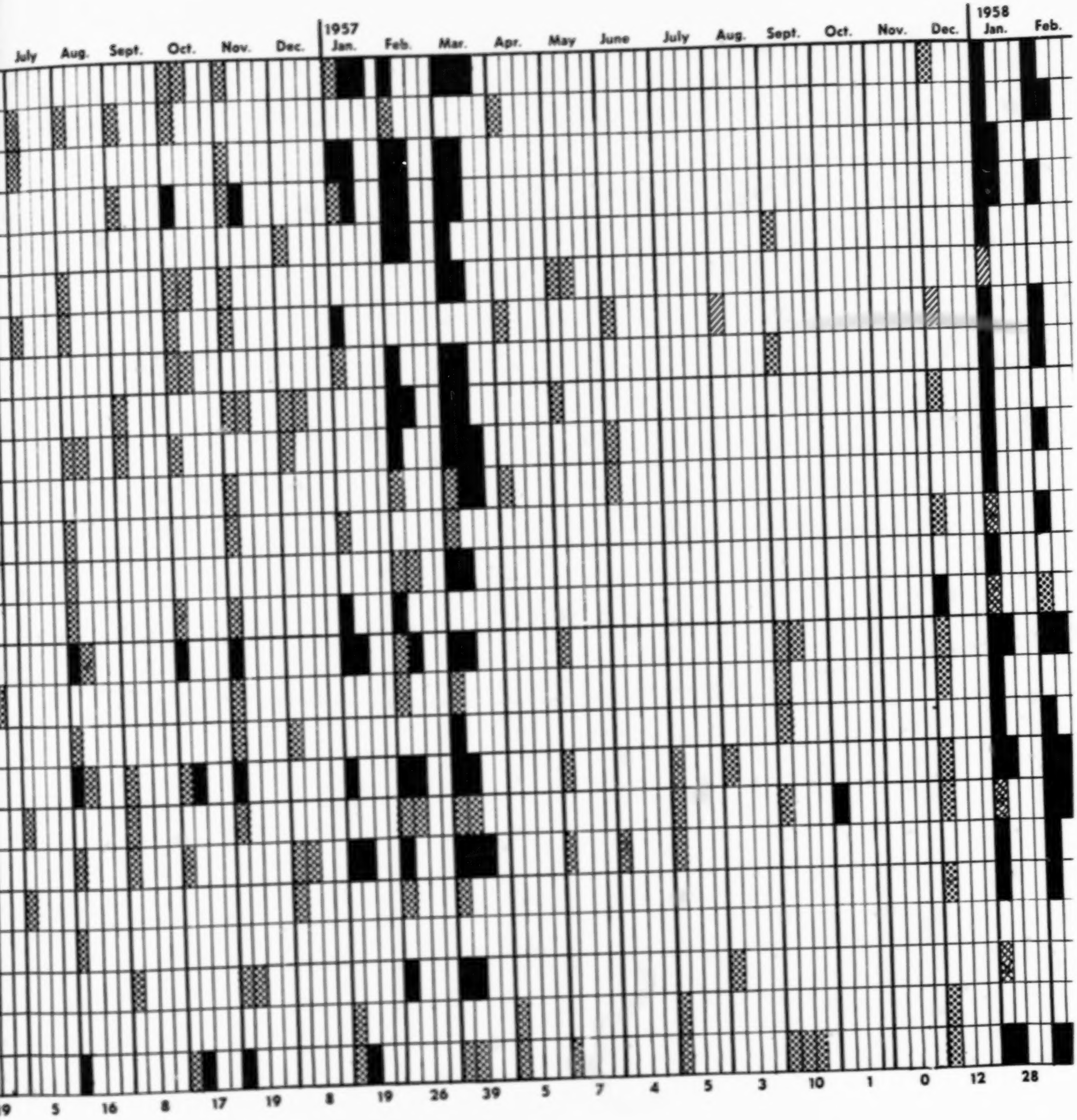


Figure 1.

Types of Contacts for 25 Participants by months from January, 1955 to April, 1959.

Each month has four bars with each bar representing one contact. No participant had more than four contacts in any one month. However, the position of bars under given months has no relation to the weeks of the month.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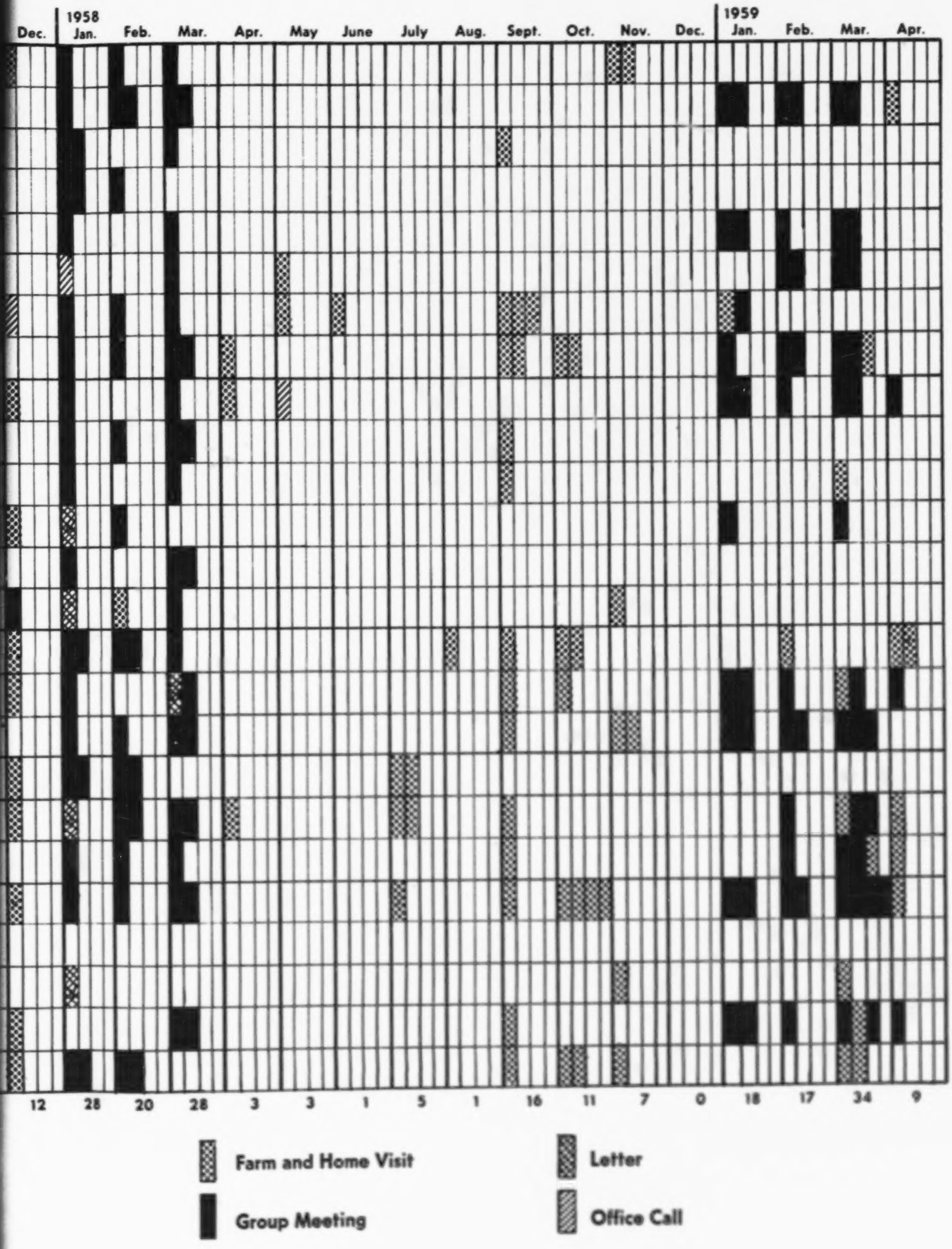
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11
7
0
18
17
34
9
Farm and Home Visit
Group Meeting
Letter
Office Call

Table 5. Number and Percentage Distribution of 25 Families According to Per Cent of Contacts by Type of Contact.

Per cent of contacts	Farm and home visit	Group meeting	Office	Letter
		Number		
0	-	1	21	19
1 - 9	-	-	4	6
10 - 19	-	3	-	-
20 - 29	-	4	-	-
30 - 39	3	6	-	-
40 - 49	2	4	-	-
50 - 59	6	5	-	-
60 - 69	7	2	-	-
70 - 79	6	-	-	-
80 - 89	-	-	-	-
90 - 99	-	-	-	-
100	1	-	-	-
Total	25	25	25	25
		Per cent		
0	-	4	84	76
1 - 9	-	-	16	24
10 - 19	-	12	-	-
20 - 29	-	16	-	-
30 - 39	12	24	-	-
40 - 49	8	16	-	-
50 - 59	24	20	-	-
60 - 69	28	8	-	-
70 - 79	24	-	-	-
80 - 89	-	-	-	-
90 - 99	-	-	-	-
100	4	-	-	-
Total	100	100	100	100
	Average (mean) 60.3	Average (mean) 37.4	Average (mean) 1.0	Average (mean) 1.2

Subject matter taught

Topics by major categories

The topics or classes of topics discussed or considered by these 25 families in the 555 contacts made with them are listed below according to major categories:[1]

Explanation and introduction to the Program

Relating to keeping of farm and home records

- Farm cash account book
- Farm inventory record
- Cross checking farm cash account and farm inventory books
- Home account book
- Home inventory book
- Fixed expenditure sheet
- Know your valuable papers form
- Filing bills and receipts
- Income and outgo record
- Net worth record
- Labor income blank no. 40
- Financial situation blank
- Converting milk to 3.7

Analysis of farm business and of family expenditures

- Analysis of farm business including business management factors
- Controlling cost in milk production
- Productive man work units-labor efficiency
- Farm size
- Number of cows
- Milk price
- Labor earnings and labor income
- Money for family living
- Feed costs
- Milk-gain ratio
- Machine costs
- Capital

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[1] The number of contacts with all agents working with the 25 families was 593 (See page 9). There were, however, 555 contact occasions which means that more than one agent was involved on some occasions.

- Debts, loans, credit
- Summary of individual businesses
- Summary of businesses of all county participants
- Summary of family expenditures for 50 families
- Agricultural situation

Agronomy

- Agronomy (general)
- Seed selection
- Fertilizer and lime
- Rotation
- Soil maps
- Soil testing
- Farm map
- Walking farm
- Demonstration plot
- Other agronomy topics

Feeding practices

Budgeting ahead

Farm program ahead

DHIC, value of

Partnerships

Barn construction and remodeling

Miscellaneous home economics topics primarily related to management

Kitchen

Housing

Social security

Insurance

Income tax

Goals

Decision making and decisions

Participation

Evaluation of program

Miscellaneous

A total of 58 different topics or classes of topics were considered in the 555 contacts between the agents and the 25 families.[1] The average family was exposed to 46.1 per cent or a little less than half of the 58 topics. The range was from 16 per cent of the 58 topics for one to 65 for 2 of the 25 families. (Table 6) Twelve per cent of the 25 families considered under 30 per cent of the topics.

Table 6. Distribution of 25 Families According to Per Cent of Total Topics (58) to Which Exposed.

Per cent of total topics (58) to which exposed	Number of families	Per cent of families
10 - 19	1	4
20 - 29	2	8
30 - 39	4	16
40 - 49	8	32
50 - 59	6	24
60 - 69	4	16
Total	25	100

Average (mean): 46.1 per cent

Actual range 16 to 65

Topics according to extent of exposure

Figure 2 arrays in graphic form the 58 topics or classes of topics according to the per cent of participants exposed or taught at least one time. The 11 topics to which 80 per cent or more of the 25 participants were exposed are as follows:

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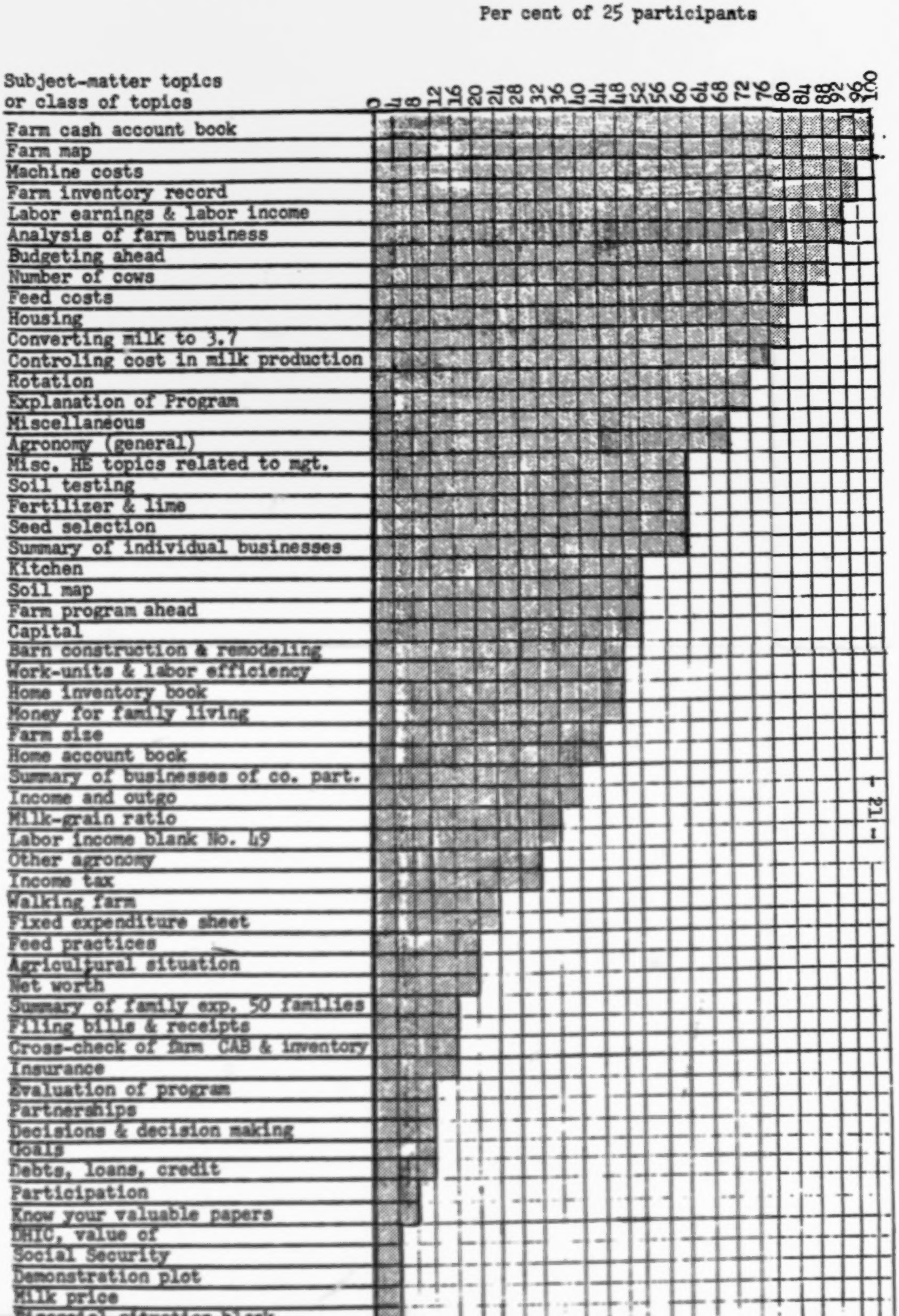
[1] The 58 topics include major categories which have no subtopics and the subtopics under major categories but exclude from the count those major categories having subtopics.

Figure 2. Per cent of 25 Participating Families Exposed to Each of 58 Subject-matter Topics or Class of Topics at Least One Time.



Topics	Per cent of participants exposed at least one time
Farm cash account book	100
Farm map	100
Machine costs	96
Farm inventory book	96
Labor earnings and income	92
Analysis of farm business including business management factors	92
Budgeting ahead	88
Number of cows	88
Feed costs	84
Housing	80
Converting milk to 3.7	80

The focus on important farm management topics is clearly indicated by the foregoing list. The fact that housing, a conventional home economics topic, was considered by so large a proportion of the participants is in part the result of a special interest of the agricultural agent responsible for the program.

Another indication of the emphasis placed on different topics is to distribute topics by number of times taught. Of the 58 topics or classes of topics 41 per cent were taught from 1 to 10 times during the 4 years and 4 months covered by this study (Table 7). Only 9 per cent of the topics were taught 51 or more times. On the average this would mean that each of the 5 topics included in this 9 per cent would have been discussed 2 times in 2 instances, 3 times in 2, and 6 times in one with each of the 25 participants. However, this 9 per cent of topics includes 4 important and clear-cut management areas, i.e., farm cash account book, analysis of farm business including farm business management factors, farm inventory book and machine costs. The fifth area included in this 9 per cent of topics is agronomy (general), a subject-matter area which the Program has emphasized because the management analysis which the participants have done has pointed to agronomy as a problem area.

Table 7. Number and Percentage Distribution of Topics Discussed with Families Over a Period of 52 Months According to Number of Times Taught.*

No. of exposures	Topic titles grouped by frequencies of exposure						Number	Per cent
	(f)**		(f)**		(f)**			
1 - 10	1 1 1 1 2 2 2 3 3	Milk price Demonstration plot Social security DHIC, value of Know your valuable papers Financial situation blank Participation Goals Evaluation of Program	4 4 4 4 4 5 5	Filing bills and receipts Debts, loans, credit Summary of family expenditures for 50 families Cross-check CAB & farm inventory Insurance Net worth record Decision-making & decisions	6 6 6 7 9 9 9 10	Partnerships Agricultural situation Feeding practices Walking farm Milk-gain ratio Fixed expenditure sheet Income tax Summary of businesses of all county participants	24	41
11 - 20	11 12 12 13	Labor income blank No.40 Income & outgo Money for family living Other agronomy topics	14 14 15 15	Soil maps Home inventory book Farm size Capital	16 16 20	Home account book Work units - labor efficiency Miscellaneous HE topics primarily related to mgmt.	11	19
21 - 30	23 24 24	Fertilizer & lime Farm program ahead Soil testing	25 27	Miscellaneous Summary of individual businesses	27 28	Seed selection Kitchen	7	12
31 - 40	31 33	Program explanation including introduction to Converting milk to 3.7	33 38	Controlling cost in milk production Number of cows	39 39 40	Feed costs Farm map Housing	7	12
41 - 50	42 45	Budgeting ahead Labor earnings and labor income	46 48	Barn construction and remodeling Rotation			4	7
51 - 60	60	Machine costs					1	2
61 - 70	69	Agronomy (general)					1	2
71 - 80							-	-
81 - 90	81	Farm Inventory book	87	Analysis of farm business including business mgmt. factors			2	3
91+	138	Farm cash account book					1	2
Total							58	100

---

* Number of families contacted per month during this period ranged from 0 to 23.

** Number of times discussed with families.

The 12 topics which are at the top of the list in terms of number of times taught are as follows:

Topics	No. of times taught
Farm cash account book	138
Analysis of farm business including business management factors	87
Farm inventory book	81
Agronomy (general)	69
Machine costs	60
Rotation	48
Barn construction and remodeling	46
Labor earnings and labor income	45
Budgeting ahead	42
Housing	40
Feed costs	39
Farm map	39

When this list is compared to the preceding one on page 23, 9 of the topics also occur in that list. Agronomy (general), rotation, and barn construction and remodeling appear in the latter list but not in the first. Number of cows and converting milk to 3.7 appear in the first list but not in the latter. Even though these topics do not appear among the upper ones according to both methods of measuring exposure, 4 of them (barn construction and remodeling excepted) show a fairly high degree of exposure by both methods.

A combination of the upper ranking topics using both the approach of per cent of 25 families taught each topic at least one time and the number of times each topic was taught yields the following list:

Farm cash account book (Both methods)
Analysis of farm business including business management factors (Both methods)
Farm inventory book (Both methods)
Machine costs (Both methods)
Labor earnings and labor income (Both methods)
Budgeting ahead (Both methods)
Housing (Both methods)
Feed costs (Both methods)
Farm map (Both methods)

This list of topics certainly comprehends some of the major subject-matter areas of farm management. The one exception is housing which is conventionally a home economics subject-matter area that is closely related to home management but not its major focus.

Relationship of subject matter to methods

As has been noted previously, in the third calendar year (1957) of the Program, group meetings for teaching participants were introduced. It was thought that an examination of contacts for each of the 3 12-months periods which ended with a concentration of group meetings and for which data were available might show important shifts in the number of times the major subject-matter areas were taught through farm and home visits and through group meetings. The periods for which this examination was made were April, 1956-March, 1957; April, 1957-March, 1958; and April, 1958-March, 1959 (Table 8 and Figure 1 page 15).

From the first to third 12-months period the contacts through group meetings increased from 36 per cent of the total to 50 per cent, or by 14 percentage points. For each of 4 major subject-matter areas the percentages of total times taught through group meetings also increased from the first to third period. The times keeping farm and home records was taught through group meetings rose from 44 to 72 per cent, for analysis of farm business and family expenditures from 66 to 90, for agronomy from 26 to 66 and for all other subject matter[1] from 24 to 29.

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[1] All other subject matter includes the following: program explanation including introduction to, feeding practices, budgeting ahead, farm program ahead, value of DHIC, partnerships, barn construction and remodelling, miscellaneous home economics topics primarily related to management, kitchen, housing, social security, insurance, income tax, goals, decision-making and decisions, participation, evaluation of Program, and miscellaneous.

Table 8. Percentage Distribution of Contacts and of Teaching Four Major Subject-matter Classes According to Methods of Contact, by Three 12-Months Periods.

Contacts and subject-matter exposures by 12-months periods		Percentage distribution			
		Farm and home visits	Group meetings	Other	Total
1. Contacts	- April, 1956-March, 1957	64	36	-	100
	April, 1957-March, 1958	36	58	6	100
	April, 1958-March, 1959	49	50	1	100
2. Exposures to keeping farm & home records	- April, 1956-March, 1957	56	44	-	100
	April, 1957-March, 1958	20	78	2	100
	April, 1958-March, 1959	28	72	-	100
3. Exposures to analysis of farm business & family expenditures	- April, 1956-March, 1957	34	66	-	100
	April, 1957-March, 1958	11	83	6	100
	April, 1958-March, 1959	10	90	-	100
4. Exposures to agronomy	- April, 1956-March, 1957	74	26	-	100
	April, 1957-March, 1958	59	39	2	100
	April, 1958-March, 1959	34	66	-	100
5. Exposures to all other subject matter	- April, 1956-March, 1957	76	24	-	100
	April, 1957-March, 1958	76	22	2	100
	April, 1958-March, 1959	70	29	1	100

When the data of Table 8 are examined in detail, the shifts which had occurred in teaching of the 4 broad subject-matter areas through farm and home visits and through group meetings were: 1) considerably more concentration of teaching the keeping of farm and home records through group meetings, 2) more concentraion of the analysis of farm business and family expenditures through group meetings, 3) slightly more concentration of teaching agronomy through group meetings, and 4) in contrast, more concentration of all other subject matter through farm and home visits. This pattern of the shifting of the teaching of subject matter between farm and home visits and group meetings means that the basic subject matter of the Program has come to be centered in group meetings with other subject matter being concentrated in farm and home visits.

ED018714

EVALUATION STUDY OF FARM AND HOME MANAGEMENT PROGRAM IN NEW YORK STATE

A CASE STUDY OF THE FUNCTION OF THE NEIGHBORHOOD IN THE FARM AND HOME MANAGEMENT PROGRAM

Report No. 5

Office of Extension Studies
State Colleges of Agriculture and Home Economics
Cornell University
Ithaca, New York
June 15, 1960

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PREFACE

The original design of the Evaluation Study of the Farm and Home Management Program in New York State included an investigation of a so-called area approach in conducting the Program which was being followed in Oneida County. The conditions under which the evaluation study and the Program were initiated and the subsequent developments of both prevented the organization of an experimental study of this area approach. However, a limited study was conducted of the area in Oneida County in which the Program was first initiated. The findings of the study are presented in this report.

The staff of the Agricultural Department of the County Extension Service, with the exception of the agent responsible for conducting the Program, did the interviewing for the study. To them and to the farmers who served as respondents the authors wish to express their appreciation. The authors also acknowledge and thank the agent in charge of the Program for his help in developing and pre-testing the questionnaire and administering it in another township in the county.

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Summary

The use of a 3-township area in conducting the Farm and Home Management Program in a New York county was studied to explore the hypothesis that the neighborhood may serve as an educational channel, particularly for informal diffusion. No conscious effort was made by those conducting the Program to identify and utilise neighborhoods. The study identified the neighborhoods and found that they had potentialities for the informal transmission of learning from one person to another. Leaving participation in the Program to free choice, as was done, failed to assure that the neighborhood leaders would be participants. Although the participants showed that they had definitely learned specific managerial techniques, there is little indication that these have been diffused to others despite efforts in this direction by participants. The study opens to question the unqualified hypothesis that the neighborhood functions automatically as an informal diffusion channel and suggests the need to evaluate the kinds and complexity of subject matter which can be diffused through this particular type of locality group.

Summary

The use of a 3-township area in conducting the Farm and Home Management Program in a New York county was studied to explore the hypothesis that the neighborhood may serve as an educational channel, particularly for informal diffusion. No conscious effort was made by those conducting the Program to identify and utilize neighborhoods. The study identified the neighborhoods and found that they had potentialities for the informal transmission of learning from one person to another. Leaving participation in the Program to free choice, as was done, failed to assure that the neighborhood leaders would be participants. Although the participants showed that they had definitely learned specific managerial techniques, there is little indication that these have been diffused to others despite efforts in this direction by participants. The study opens to question the unqualified hypothesis that the neighborhood functions automatically as an informal diffusion channel and suggests the need to evaluate the kinds and complexity of subject matter which can be diffused through this particular type of locality group.

A CASE STUDY OF THE FUNCTION OF THE NEIGHBORHOOD IN THE FARM AND HOME MANAGEMENT PROGRAM

Introduction

In 1954 a nationwide program of Farm and Home Development was initiated by the various state Extension Services. The Congress earmarked funds for this Program whose major objective was to work directly with individual farm families through intensive on-the-farm counseling. In New York State the Program has emphasized management and is designated as the Farm and Home Management Program.

In general the Program in New York has been conducted without reference to neighborhood or community. In 2 counties, however, the Program was begun in small subareas. In one of these counties 3 townships within the approximate boundaries of a community were designated as the area in which the Farm and Home Management Program in the county was to be initiated. Meetings to enroll farmers were held in each of these townships without much success. Following this effort, the agricultural agent assigned to the Program went up and down the roads contacting families and asking them several management questions by means of which he stimulated sufficient interest in a limited number of families to cause them to agree to participate.

As a phase of an evaluation of the Farm and Home Management Program in New York State[1] a study was made of this community (or 3-township area) for the following purposes: 1) to ascertain whether or not the neighborhoods and the leaders that might be found in the area had been utilized by those conducting the Program and 2) to explore how the existing neighborhood structure functioned with respect to diffusion of the subject matter of the Program participants to nonparticipants.

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[1] The Office of Extension Studies of the New York State Extension Service is conducting a study of the Farm and Home Management Program (in the State). The study is a longitudinal one which was begun in 1956 and will be concluded in 1961. The Kellogg Foundation is supporting the research. Similar studies supported by grants from the Foundation are being conducted in Iowa, North Carolina, and Washington.

Related studies

Lionberger and Hassinger in an article written in 1954 indicate the need for research in the area with which this study is concerned when they comment that, "Much research concerning neighborhood structure and trends has been done but little attention has been directed to the function of neighborhoods in relation to social action and the diffusion of farm information."[1] On the basis of their own investigations the authors concluded that, "In general, the data revealed that neighborhoods in this northeast Missouri community cannot be considered insignificant factors in the diffusion of farm information."[2]

Marsh and Coleman in the same issue of Rural Sociology in which the article by Lionberger and Hassinger appeared conclude in a research note, "The usual hypothesis is that group norms and expectations retard change....While this may well be true if group sanctions apply to specific practices, there also may be situations in which group sanctions of 'farm matters' accentuate change. Today there are some farmer groups within which there is great emphasis upon the societal values of 'efficiency and practicality' and 'science and secular rationality'."[3]

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[1] Herbert F. Lionberger and Edward Hassinger, "Neighborhood as a Factor in the Diffusion of Farm Information in a Northeast Missouri Farming Community", Rural Sociology, XIX (Dec., 1954), p. 378.

[2] Ibid., p. 384.

[3] C. Paul Marsh and A. Lee Coleman, "The Relationship of Neighborhood of Residence to Adoption of Recommended Farm Practices," Rural Sociology, XIX (Dec., 1954), pp. 388-389.

Community development programs have spread over the Southeast during the past 15 years. While these programs have tended to emphasize action, they have also attempted to use the community as an educational channel, frequently through a community club. Kaufman, Fanelli, and Windham reported 1513 organized clubs or groups involved in rural community development programs in 1955. In the 7 southern states in which these programs were operating the Extension Service was participating. While the local organizations were called community clubs or committees, the authors think they might have more accurately been designated as neighborhood groups.[1]

Bonser in a study conducted in Tennessee in 1955 states, "Evidence indicates that both rural community clubs and home demonstration clubs are effective media through which information on new homemaking ideas is channeled to farm homemakers."[2] This study was designed to discover the effectiveness of community clubs associated with the community development program in Tennessee. Although, Bonser does not discuss the nature of the communities included in his study, it is very likely that they are, as Kaufman, Fanelli, and Windham point out, neighborhoods rather than communities.[3]

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[1] Harold F. Kaufman, Alexander Fanelli, and Gerald O. Windham, Community Development Programs in the Southeast, (Community Series No. 9; Social Science Research Center, Division of Sociology and Rural Life, Mississippi State College, State College, Mississippi), pp. 9, 11, and 13.

[2] Howard J. Bonser, Better Homemaking Practices Through Rural Community Organizations, (Tennessee Agr. Expt. Sta. Bull. 287: Knoxville, Tennessee) p. iii.

[3] Evidence from various surveys and studies in the Southeast in which one of the authors of this report participated while on the TVA staff between 1949 and 1955 supports this point-of-view. Mimeographed reports presenting the data of 3 of these studies are: Interdivisional-Interdepartmental Committee of Tennessee Valley Authority and University of Tennessee, Social and Economic Materials Relating to Chestuee Watershed and Vicinity, (TVA mimeographed report; Knoxville, Tennessee, 1953); L.J. Strickland, Frank D. Alexander, and Crosby Murray, Report of the 1953 Community Fertilizer Program Conducted in Eight Counties of Tennessee, (TVA mimeographed report; Knoxville, Tennessee, 1953); and Frank D. Alexander, Rural Communities, Organized Groups, and Public Agencies in Alcorn County, Mississippi, in Relation to Community Development, Particularly Educational Programs Through Rural Community Clubs, (Division of Sociology and Rural Life, Mississippi State College, State College, Miss. 1955).

The experience provided by the southern community development programs and the findings of Bonser's study lend support to the assumption that the neighborhood (or small community) can serve as an educational channel, particularly to support educational work through organized clubs. This study, however, is concerned with a specific aspect of the educational potentiality of the neighborhood. Its major concern is the hypothesis with which Lionberger and Hassinger and Marsh and Coleman are concerned, namely, that the neighborhood serves as a channel for informal diffusion of farm practices.

Method

This is a case study of a small area approach used in a particular educational program. Since this program was developed without research considerations, it is without experimental design and has the further limitation of a small number of cases both in terms of neighborhoods and program participants.

A list of 110 farm operators which included most of those living in the community area in which the Program was being conducted was prepared by a staff member of the agricultural department of the county Extension Service. Among these were 26 farmers who were participants in the Farm and Home Management Program. These 26 along with 28 nonparticipants randomly selected as a sample of the nonparticipants in the area were included in the survey. Twenty-three participants and 19 nonparticipants were interviewed. Twelve operators of the 54 chosen for study either refused, had stopped farming, or were doing only a negligible amount of farming and were not interviewed. Three members of the agricultural department of the county Extension Service did the interviewing.

The questionnaire for the survey was designed to determine neighborhood groupings, to identify leaders, and to ascertain whether or not participants in the Farm and Home Management Program were communicating to other farmers what they were learning in the Program.

Neighborhoods and distribution of participants

Each farm operator in the sample was asked to check from a list of all operators in the area those whom he considered neighbors. With the use of these data a sociogram was constructed and used to determine neighborhoods.

Four neighborhoods which are referred to hereafter as I, II, III, and IV were identified by this method. The 26 Program participants were residing in the 4 neighborhoods as follows:

Neighborhood	No. of Program Participants
I	14
II	6
III	2
IV	4

The distribution of participants by neighborhood may be presumed to be one of the factors which might hinder or aid diffusion of ideas and practices taught in the Program. Neighborhood I has the largest number of participants and has also the largest number of farm operators of the 4 neighborhoods. When the ratio of participants to nonparticipants is considered it is found that each of the neighborhoods has about the same ratio.

Relationship of small study groups to neighborhoods

In addition to farm and home visits, the agent responsible for the Program in the community area (3 townships) periodically meets with small groups of participants. They usually meet alternately in the homes of the participants. Without consciously identifying participants with neighborhoods as delineated in this study, 25 of the participants were divided into 3 groups for the small group meetings with 7 in one, and 9 in each of the other 2.[1] There is some identity between study groups and neighborhoods but it is not complete. Every member of one group is also a member of neighborhood I. The other study groups consist of operators from more than one neighborhood. The group with 7 participants draws 4 from neighborhood I and 3 from neighborhood II, and the other group draws 5 from neighborhood III and 4 from IV. Thus, the formation of study groups without conscious concern for neighborhood attachments did not fully utilize whatever advantage for educational purposes may be associated with all group members belonging to the same neighborhood.

Relationship of leadership and neighborhood

Two questions were asked concerning the relationship of leaders to neighborhoods: 1) Do those who choose leaders select persons who live in the same or a different neighborhood? 2) Are participants in the Farm and Home Management Program chosen as leaders more times than nonparticipants?

In general there is a tendency for leaders and their choosers to live in the same neighborhood. In 3 of the 4 neighborhoods 59 per cent or more of the leader choices were made by persons living in the same neighborhood in which the chosen leader resides. (Table 1)

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[1] One of the 26 participants included in the survey never participated in a study group.

Table 1. Per Cent of the Total Choices for Leaders That Came From Persons Living in the Same Neighborhood as the Leaders.

Neighborhood	Per cent of total choices
I	78 (N=64 choices)
II	59 (N=29 choices)
III	50 (N= 8 choices)
IV	60 (N=15 choices)
Total	69 (N=116 choices)

In 2 neighborhoods almost all of the choices (80 per cent in I and 89 per cent in IV) were for leaders who were participating in the Farm and Home Management Program (Table 2). In the other 2 neighborhoods, II and III, non-participants were chosen much more often, receiving 76 and 75 per cent of the choices respectively. When tested by chi square, the difference in choices for leaders according to their participant status and neighborhood of residence is significant at the .001 level. Thus, conducting a program within an area in which neighborhoods exist and letting people volunteer as participants will not assure that the leaders in the neighborhoods will be the ones choosing to participate. Since there is a definite tendency for the neighborhoods to provide the locus of leadership, it might be concluded that the neighborhood and leadership structure automatically provides potentialities for the participants to diffuse what they have learned to others in the area. For neighborhoods and leadership patterns to be utilized , however, it appears that conscious

Table 2. Per Cent of Choices for Leaders That Were for Participants and Nonparticipants and Made by Persons Living in the Same Neighborhood in Which the Leaders Being Chosen Reside.

Neighborhood of residence*	For participant leaders	For nonparticipant leaders	Total
	Per cent of choices		
I	80	20	100 (N=50 choices)
II	24	76	100 (N=17 choices)
III	25	75	100 (N= 4 choices)
IV	89	11	100 (N= 9 choices)
Total	66	34	100 (N=80 choices)

$X^2 = 36.7353$ d. f. = 3 $P < .001$

* Neighborhood of residence in the community in which the Program was being conducted was treated as one of the 2 variables used in calculating chi square. This permits an indication of the existence of association and would also permit calculation of C. Direction of association might be determined by inspection if certain neighborhood characteristics not now available were obtained.

efforts must be made to identify leaders and interest them in participating rather than simply leaving their participation to free choice.

Diffusion of managerial practices in one neighborhood

Since neighborhood I has what may be considered an adequate number of operators and at the same time a preponderance of leadership choices for participants, it offers an opportunity to examine the extent of diffusion of managerial practices which has occurred within a neighborhood since the Program began.

4

The 2 major emphases of the Farm and Home Management Program have been 1) to teach farmers to study (analyze) their farm businesses and 2) to use records as the basis for this study. The farm operators were asked whether or not they had done 6 different studies (analyses) of their business in the 2 to 3 years since the Program was started, i.e., 1) size of business - number of cows, 2) production per acre of forage crops, 3) production per cow, 4) the percentage of milk check spent on grain, 5) machinery costs per cow, and 6) production per man. They were also asked whether or not they used written records in doing each of these studies.

For the purpose of analyzing the data obtained regarding studies done, the percentages which appear in Table 3 were calculated for participants and nonparticipants separately. These percentages were obtained by dividing the total number of studies made by each group by the total possible number which the group could have made. Thus there were 13 participants who did 33 studies before the Program began. Since each of these operators could have reported having done 6 studies for a possible total of 78, the per cent of studies done was found by dividing 33 by 78.

The percentages in Table 4 were calculated for the purpose of analyzing the data on the use made of written records in doing farm business studies. Only those operators who had done one or more of the 6 studies about which they were asked are included. The percentages were obtained for participants and nonparticipants separately by dividing the total number of studies done with the use of written records by the total number of studies done by the group.

Table 3. Percentage the Total Number of Farm Business Studies Made by Participants and Nonparticipants Before and After the Program Began Was of the Total Possible Number of Studies, Neighborhood I.

Groups	Made study before	Made study after
	Percentage which total number of studies was of total possible number of studies	
Participants*	42	99
Nonparticipants**	17	20

* 13 operators involved with the total possible number of studies being 78 (6 per operator).

** 11 operators involved with the total possible number of studies being 66 (6 per operator).

Table 4. Percentage the Total Number of Farm Business Studies Made With Use of Written Records by Participants and Nonparticipants Before and After Program Began Was of the Total Number of Studies Made by These Individuals, Neighborhood I.*

Groups	Study with use of written records - before	Study with use of written records - after
	Percentage which total number of studies using written records was of the total number of studies done	
Participants	64	95
Nonparticipants	36	62

* Only those operators who did one or more of 6 studies about which they were asked are included. The number of operators and studies involved were: row 1 - cell 1, 6 operators who made 33 studies; row 1 - cell 2, 13 operators who made 77 studies; row 2 - cell 1, 2 operators who made 11 studies and row 2 - cell 2, 3 operators who made 13 studies.

The percentage of farm business studies done by participants in neighborhood I rose markedly from 42 per cent of the total possible number for the group before the Program started to 99 per cent after the Program was functioning, a gain of 57 percentage points (Table 3). The percentage of these studies made with the use of written records rose from 64 per cent of the studies made to 95 per cent, a gain of 31 percentage points (Table 4).

That the participants in neighborhood I have learned to use certain of the management techniques which the Program has emphasized is well supported by the foregoing facts. The participants in this neighborhood would appear therefore, to be in a position to transmit their learning to neighbors. Moreover, 80 per cent of the leadership choices for leaders living within the neighborhood were for those who were Program participants. (Table 2) Nevertheless, the percentage which the total number of studies done by nonparticipants was of the total possible number of studies rose only slightly, from 17 per cent before the Program began to 20 per cent after, a gain of only 3 percentage points (Table 3). The percentage of these studies made using written records rose from 36 per cent of the total number done to 62 per cent, a gain of 26 percentage points (Table 4). Obviously there has been little diffusion of study practices by the participants. In the case of using written records in making studies of farm businesses the gain of 26 percentage points suggests possible diffusion. The number of nonparticipant operators who used written records, however, is only 2 for "before the Program began" and 3 "after the Program began". This small number of cases hardly warrants any claim for diffusion of using written records in making farm business studies.

The conclusion suggested at this point is that given natural neighborhood groupings of farm operators with most of the leader choices being for Program participants who have definitely been taught to use certain management techniques, it does not follow that the participants will transmit these to their neighbors. A possible explanation for this lack of diffusion which might be offered as a hypothesis for further study is that techniques as complex as studying a farm business and using records for doing so will not diffuse from farmer to farmer as have simpler practices such as the use of improved varieties of seed or high analysis fertilizers.

Discussion of business analysis by participants with nonparticipants

Another interest of the study was to ascertain the number of nonparticipants each participant talked with about farm business analysis. The following tabulation indicates the per cent of participants by neighborhoods in which they resided who had talked with nonparticipants residing in the same neighborhoods regarding specific business analyses[1] and the number of different nonparticipants with whom they talked:

Neighborhood	No. of participants per neighborhood	Per cent of participants who talked with nonparticipants	No. of nonparticipants with whom talked
I	13	46	13
II	4	0	0
III	2	50	1
IV	4	25	1
Total	23	35	15

In only neighborhoods I and III have any appreciable percentages of the participants talked with nonparticipants about farm business analyses. In neighborhood I, 60 farm business studies were discussed with 13 nonparticipants, or an average of 4.6 studies for each nonparticipant. In neighborhood II no participant talked with a nonparticipant and in each of the other 2 neighborhoods one participant had talked with one nonparticipant. In each of these 2 instances only one study was discussed. In all neighborhoods combined 8 or about one-third of the 23 participants residing in these areas, had discussed 62 studies with 15 different nonparticipants. Five of the 8 participants had been chosen at least once as leaders in their neighborhoods.

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[1] One or more of the 6 studies listed on page 11

These data indicate that in the 2 or 3 years since the Program began participants have made efforts to communicate to others what they have learned. Since only 16[1] or 17 per cent of the 94 nonparticipant farm operators listed as living in the community (or 3-township area) were talked with, obviously the number of nonparticipants involved have not been numerous. Moreover, for neighborhood I, the one neighborhood of the 4 for which the data on diffusion met the requirements of analysis, the small amount of diffusion which could be attributed to participants has been indicated. These findings of the study strongly suggest that the complex practices that constitute management cannot be expected to be diffused within 2 or 3 years. While efforts at diffusion may awaken awareness and interest, the very complexity of the management process could possibly prevent complete diffusion.

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[1] Since one participant discussed farm business analysis with a nonparticipant not residing in his neighborhood the number of nonparticipants talked with includes one more than the number given in the preceeding tabulation.

Conclusions

1. Without any conscious attention to neighborhoods in the conduct of an educational program small study groups were formed which made only partial use of existing neighborhood groupings.

2. Although the participants in the Farm and Home Management Program in the subarea of the county have definitely learned the relatively complex techniques involved in this educational effort, there is no evidence that any appreciable diffusion to other farm operators has occurred within a 2 to 3 year period.

3. There is evidence that the participants have made efforts to diffuse the managerial skills which they have learned, but as indicated in the second conclusion the diffusion that has actually occurred is modest.

4. While this study is exploratory and limited in scope, its findings question the unqualified hypothesis that the neighborhood automatically functions as an informal diffusion channel and suggests the need to evaluate the kinds and complexity of subject matter which can be diffused in neighbor groups.

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EVALUATION STUDY OF FARM AND HOME MANAGEMENT PROGRAM IN NEW YORK STATE

TIME AND COST IN-PUT AND COST-BENEFIT RELATIONSHIP FOR THE FARM AND HOME MANAGEMENT PROGRAM IN THE 10 STUDY COUNTIES OF NEW YORK STATE

Report No. 6

Office of Extension Studies
State Colleges of Agriculture and Home Economics
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May 31, 1961

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PREFACE

The original design of the Evaluation Study of the Farm and Home Management Program in New York State included a cost-benefit study of the Program. To obtain the data necessary to make cost and benefit estimates of an educational program is difficult since it is almost impossible to determine the monetary value of educational results, especially long-time results. The findings of this report should, therefore, be recognized as having definite limitations. Any implications based on the findings require conservative formulation.

The use of agents' time in-put on the Program as the basis for estimating its major cost provided an admitedly inadequate method for making such estimates but it was the only approach that seemed manageable. The use of farm operators' changes in labor income as the index of benefits also has limitations but this income data offered the best feasible approach.

It is believed, however, that the report will provide an indication of the cost of the Farm and Home Management Program and of the monetary benefits which, over a short time-span, have accrued to the participants.

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SUMMARY OF FINDINGS

This is a study of Program time and cost in-put and cost-benefit relationship for the 10 counties included in the evaluation study of the Farm and Home Management Program in New York State.

Time In-put of Agent Staff

1. During the 4-year period (1956-1959) the per cent of total staff time of the combined agricultural and home demonstration departments in the 10 counties which was devoted to the Farm and Home Management Program rose from 13.8 per cent in 1956 to 16.1 in 1959.

2. In 1956 the agricultural department staffs of the 10 counties gave 16.4 per cent of their time to the Program and the proportion rose to 19.2 per cent in 1959.

3. In 1956, when 6 of the 10 counties had their home demonstration departments involved in the Program, 7.1 per cent of the total staff time of these departments was devoted to the Program. The per cent rose to 9.5 for the home demonstration staff in the 6 counties in the Program in 1959.

4. For the 4-year period (1956-1959) the average per cent of staff time devoted to the Program by the agricultural departments was 17.4, by the home demonstration departments was 8.4, and by the combined departments 14.7.

5. For the 4-year period the average number of agent-years per year devoted to Program in the 10 counties for the agricultural departments was .63, for the home demonstration departments in the 5 counties in which this department participated in each of the 4 years, .27.

Estimated Cost of Program

1. The county-level cost of the Program in the 10 counties for the agricultura departments rose from $49,881 in 1956 to $63,134 in 1959, and for the 6 participating home demonstration departments from $7,909 in 1956 to $14,953 for the 6 participating departments in 1959. The county-level cost of the Program for the combined departments in the 10 counties rose from $57,790 in 1956 to $78,087 in 1959.

2. The county-level cost of the Program in the 10-counties for the 4-year period (1956-1959) for the agricultural departments was $222,246, for the participating home demonstration departments was $49,708, and for the combined departments $271,954.

3. When the cost of management specialists from the college was added to county-level cost, the total cost of the Program for agricultural departments rose from $57,898 in 1956 to $74,850 in 1959, for the participating home demonstration departments from $14,180 in 1956 to $19,580 in 1959, and for the combined departments from $72,078 in 1956 to $94,430 in 1959. In 1956, the specialists' cost was 19.8 per cent of the grand total and in 1959, 17.3 per cent.

4. The grand total cost (county-level costs for both departments plus both farm and home management specialists' costs for the combined departments for the 4-year period, 1956-1959) was $331,047, with specialists' costs constituting 17.8 per cent of this total.

Number of Participants and Length of Participation

1. In 1956 when all 10 study counties had gotten their programs started, the total number of participating families was 474 with 7.1 per cent dropping out during the year. The total number of participating families rose gradually to 651 in 1959 with 16.2 per cent of drop-outs in that year.

2. During the 6 program years a total of 1052 families participated in the Program. Of these 495 were continuing in the Program at end of 1959; 295, or 28 per cent, had dropped out; and 262, or 25 per cent had graduated or completed the work.

3. The average number of years of participation of those who had graduated or completed was 3.3.

4. The class of reasons most often given by the agents for participants dropping out was no interest, loss of interest, became inactive and the next in order of frequency was sold farm or dairy.

Cost of Program Related to Participation: 1956-1959

1. For the 4-year period (1956-1959) the average per family-year cost for the agricultural department at the county level was $95 and for the agricultural and home demonstration departments combined, $116.

2. For the 4-year period (1956-1959) the average per family-year cost for the farm management phase of the Program (county-level agricultural department cost plus farm management specialists' cost) was $110.

3. For the 4-year period (1956-1959) the average per family-year cost combining agricultural and home demonstration department costs and farm and home management specialists' costs was $141.

Comparison of Per Participant County-level Program Cost With Per Capita Regular Program Cost of Agricultural Departments in 10 Study Counties

1. The per participant county-level cost of the farm management phase of the Program in the 10 study counties as a whole was $105 in 1956 compared to a per commercial farmer cost for the regular agricultural department Extension program of $16.[1] In 1959 the respective figures were $99 and $19. Thus the per participant county-level cost of the Program was 6.6 times that of the per commercial farmer county-level cost for the regular program in 1956 and 5.1 times in 1959.

2. The per participant county-level cost of the farm management phase of the Program in the 10 study counties as a whole was $105 in 1956 compared to a cost of $17[2] per association member of the agricultural department for the regular agricultural department Extension program. In 1959 the respective figures were $~~99~~97 and $19. Thus, the per participant county-level cost of the Program was 6.2 times that of the per association member county-level cost for the regular program in 1956 and 5.1 times in 1959.

Cost-benefit Relationship

1. On the basis of the advantage in labor income in 1959 of 87 participants over 87 pair matched nonparticipants (control group) the cost-benefit ratio for the farm management phase of the Program over 3.9 years of participation is .983. This is based on an average (per participant) cost figure of $429 for the 3.9 years and an average (per participant) benefit figure of $436 for one year, 1959. Thus, in this one year (1959) the average labor income advantage of 87 participants over 87 pair matched nonparticipants more than paid for the cost of the Program. It should be mentioned, however, that the benefit figure of $436 could have occurred by chance between 1 and 1.5 times out of 10. Moreover, in matching the 87 participants and nonparticipants much of the representative character of the original random sample was lost and hence the data for the 87 pairs may not be considered representative but rather indicative of the influence of the Program on all participants.

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[1] The commercial farmers used to obtain this per capita cost were those receiving $2,500 or more from the sale of farm products. This group should be considered a hypothetical clientele used to provide a basis for examining comparative costs. It is not identical with the actual clientele (those taught and serviced) of the agricultural departments.

[2] These association members are not identical with the actual clientele (those taught and serviced) of the agricultural departments and should be considered a hypothetical clientele used for the purpose of examining comparative costs.

TIME AND COST IN-PUT AND COST-BENEFIT RELATIONSHIP
FOR THE FARM AND HOME MANAGEMENT PROGRAM
IN THE 10 STUDY COUNTIES OF NEW YORK STATE

Introduction

This study of Program time and cost in-put and cost-benefit relationship for the 10 counties included in the evaluation study of the Farm and Home Management Program in New York State has these objectives: 1) to indicate the time in-put of the agent staff in conducting the Program; 2) to show the cost of the Program at the county level and the total cost of the Program for the 10 counties as a whole, including both county and state costs; 3) to describe and analyze the record of participation; 4) to relate Program cost to participation; 5) to compare per capita Program cost with per capita regular program cost; and 6) to relate Program cost to income benefits of the participants.

Major Sources of Data

The data on time in-put and finances were obtained from monthly time reports of agents, from the "Financial Summary of County Extension Associations" prepared annually by the Finance and Business Office of the State Colleges of Cornell University, from salary records of the Finance and Business Office of the State Colleges of Cornell University, from records of the offices of the agricultural and home demonstration state leaders, and from records and estimates of the specialists in the Department of Agricultural Economics of the College of Agriculture and Department of Household Economics and Management of the College of Home Economics. The data on number of participants and number of years in the Program was obtained through periodic surveys of the agricultural agents responsible for the Program. With the exception of the data on number of participants and their years of participation, the basic data for the study were obtained for the years 1956 through 1959 because these were the years covered by the evaluation study and hence the period during which most of the data on the Program were recorded. Participation data were obtained, however, from 1954 through 1959, thus making possible a more complete treatment of this aspect of the study.

Time In-put of Agent Staff

During the 4-year period the per cent of total staff time of the combined agricultural and home demonstration departments in the 10 counties which was devoted to the Farm and Home Management Program rose from 13.8 per cent in 1956 to 16.1 in 1959 (Table 1). The smallest per cent (13.0) of time given to the Program was in 1957 and the largest (16.4) was in 1958. There

Table 1. Distribution of Counties by Departments and by Combined Departments According to Per Cent of Staff Time Devoted to the Farm and Home Management Program: 1956-1959.

	Agricultural department				Home demonstration department				Both departments			
	1956	1957	1958	1959	1956	1957	1958	1959	1956	1957	1958	1959
Per cent of staff time	Number of counties				Number of counties				Number of counties			
Under 5.0	-	-	-	-	1	4	-	1	-	-	-	-
5.0 - 9.9	1	2	2	2	3	2	4	2	2	4	2	4
10.0-14.9	4	3	2	2	2	1	3	2	5	4	3	3
15.0-19.9	3	3	2	3	-	1	-	1	1	2	2	1
20.0-24.9	-	2	1	-	-	-	-	-	1	-	2	-
25.0-29.9	1	-	2	2	-	-	-	-	-	-	1	1
30.0-34.9	1	-	-	-	-	-	-	-	1	-	-	1
35.0-39.9	-	-	1	-	-	-	-	-	-	-	-	-
40.0-44.9	-	-	-	1	-	-	-	-	-	-	-	-
Total	10	10	10	10	6	8	7	6	10	10	10	10
Average (mean) per cent	16.4	15.5	18.8	19.2	7.1	6.5	10.9	9.5	13.8	13.0	16.4	16.1

was a fairly wide range among the 10 counties in proportion of staff time given to the Program. In the first year of the 4-year period the range was from 8.4 to 32.1 per cent, and in the last year from 6.1 to 31.4. The same county held the lowest position in both years but this was not true of the highest position.

In 1956 the agricultural department staffs of the 10 counties gave 16.4 per cent of their time to the Program and the proportion rose to 19.2 per cent in 1959. In 1957 the per cent of time devoted to Program was lowest (15.5) and in 1958 it was almost as high as it was in 1959. The range in the percentages among the 10 counties in 1956 was from 9.6 to 32.1 and in 1959 from 7.3 to 43.8.

The number of home demonstration departments in the 10 counties which were participating in the Program varied from year to year (Table 1). In 1956, 7.1 per cent of the staff time of the 6 participating counties was devoted to the Program. The per cent rose to 9.5 for the departments in the 6 counties which were participating in 1959. The range in percentages among the counties for 1956 was from 1.4 to 14.5 and for 1959, from 2.2 to 15.1.

Because of differences in the size of staffs in the 10 counties, the question may be raised as to whether the percentage of total staff time devoted to the Program is a mathematical function of the total number of staff members. This is especially true in view of the fact that the memoranda of agreement between the counties and the state office of the Extension Service under which funds were provided for partial support of the Program contained a stipulation which not infrequently called for as much time of one staff member in counties with small staffs as in those with large ones.[1] If, for example, a county with a 2-man agricultural staff agreed to devote from 80 to 90 per cent of one man's time to the Program and this agreement was strictly adhered to, the per cent of total staff time devoted to the Program would obviously be higher when compared to a 4-man staff where all of the time of one staff member was given to the Program.

For the 10 agricultural departments an examination was, therefore, made of the relationship of staff size to percentage of staff time devoted to the Program for the 10 agricultural departments.[2] The expectation that the smaller staffs would have the higher percentages of time devoted to the Program was not supported by this examination. Actually, the larger staffs tended to give the higher percentages of time to the Program with no especially consistent position for the smaller staffs.

A distribution of the 10 counties according to staff time devoted to the Program for the entire 4-year period is presented in Table 2 by departments and combined departments. For the 4-year period the average per cent of time given to the Program by the agricultural departments was 17.4, by the home demonstration departments 8.4, and by the combined departments 14.7. The range in percentages for the 10 agricultural departments was from 7.7 to 26.8 and for the 8 home demonstration departments participating in the Program for 2 or more of the 4 years 3.9 to 12.2, and for the combined departments 7.5 to 21.4.

Staff in-put may also be indicated by number of agent-years. For the 4-year period the average number of agent-years per year for the agricultural

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[1] Over the 4-year period in the agricultural departments of the 10 counties the amount of time stipulated in the agreements varied from 50 per cent to 125 per cent of a professional man-year. The funds provided by the state office of the Extension Service were derived from federal appropriations ear-marked for the Program. These federal funds were first made available in the fiscal year 1954-1955.

[2] Data were not available to make this examination for the home demonstration departments. The Program, however, has been predominantly agricultural and hence largely the responsibility of the agricultural agents. Moreover, the participation of the home demonstration departments in the 10 counties has generally been irregular. For these reasons the examination of the agricultural departments only can be considered adequate.

Table 2. Distribution of Counties by Departments and by Combined Departments According to Per Cent of Staff Time Devoted to the Farm and Home Management Program for the 4-year Period (1956-1959).

Per cent of staff time	Agricultural department	Home demonstration department	Both departments
	Number		
None	-	2	-
0.1 - 4.9	-	2*	-
5.0 - 9.9	1	3**	2
10.0 - 14.9	3	3	4
15.0 - 19.9	2	-	1
20.0 - 24.9	2	-	3
25.0 - 29.9	2	-	-
Total	10	10	10
Average (mean) per cent	17.4	8.4***	14.7

* One of these counties was in home demonstration Program 2 years.

** One of these counties was in home demonstration Program 2 years and another was in home demonstration Program 3 years.

***This average includes 3 counties which did not participate in all 4 years.

Note: Percentages were calculated for home demonstration departments using as the divisor the total staff time for only those years in which a department participated in the Program.

departments was .63 with a range among the 10 counties from .27 to 1.06 (Table 3). The average number of agent-years for the agricultural departments rose slightly but not continuously from .61 in 1956 to .67 in 1959. The highest number of agent-years for a county during the 4-year period was 1.41 which county number 4 had in 1959 and the lowest was .20 in county number 10 in 1958.

For the 5 counties whose home demonstration departments participated in the Program in each of the 4 years, the average number of agent-years per year for the 4-year period was only .27 with a range from .11 to .43 (Table 3). During the 4-year period the average number of agent-years in the participating counties rose slightly but not continuously from .17 in 1956 to .26 in 1959. For those counties actually participating the highest number of agent-years was .58 in county number 3 in 1957 and the lowest was .02 in county number 6 in 1957.

Table 3. Number of Agent-years Devoted to the Program in the 10 Counties by Departments: 1956-1959.*

County code no.	Ave. no. of agent-years per year 1956-1959 (Arrayed by) a	1956	1957	1958	1959
	Agricultural department				
		Number of agent-years			
4	1.06	.77	.69	1.38	1.41
7	.97	1.10	.92	1.04	.82
3	.94	.62	.90	1.07	1.18
5	.90	.70	.93	1.00	.99
9	.58	.75	.38	.60	.60
2	.53	.53	.42	.60	.55
1	.39	.46	.46	.33	.30
8	.34	.39	.32	.34	.31
6	.33	.45	.33	.27	.28
10	.27	.34	.28	.20	.26
Ave. for 10 cos.	.63	.61	.56	.68	.67
County code no.	**Home demonstration department**				
3	.43	.23	.58	.49	.41
4	.25	.20	.14	.29	.37
2	.18	.17	.06	.21	.25
8	.15	.24	.20	.09	.10
6	.11	.04	.02	.31	.07
5	- b	.00	.06	.22	.34
1	- c	.18	.06	.00	.00
9	- d	.00	.05	.10	.00
Ave. for cos. participating	.27 e (5 cos.)	.17 f (6 cos.)	.15 (8 cos.)	.24 f (7 cos.)	.26 f (6 cos.)

* Agent year devoted to the Program was calculated by dividing number of days devoted to the Program per year by the potential number of work days during a year of a full-time agent. This figure was 234 days. It was arrived at by subtracting from 365 days 104 Saturdays and Sundays, 6 holidays, and 21 days of vacation.

a Last 3 home demonstration departments do not enter array.
b Department in Program 3 years; average no. of agent-years per year is .20.
c Department in Program 2 years; average no. of agent-years per year is .12.
d Department in Program 2 years; average no. of agent-years per year is .07.
e These averages were calculated for only those counties participating for the entire 4-year period.
f These averages were calculated for only those counties participating in the year indicated.

The data in Table 3 show that in general the in-put of agent time was about two-thirds of an agent year for the agricultural departments. In the case of the home demonstration departments the in-put was on the average slightly over one-fourth of an agent year.

Estimated Cost of Program

The first approach to an estimation of cost of the Program was to calculate total expenditures for the operation of the county Program exclusive of the cost of specialists and of state supervision and administration. This calculation of cost was made by applying the per cent of total county staff time which was devoted to the Program to total expenditures at the county level[1] for each department involved in the Program.

In 1956 the county-level cost of the Program in the agricultural departments of the 10 counties was $49,881 (Table 4). The cost declined slightly in 1957, rose considerably in 1958, and rose slightly in 1959 to a total of $63,134. The range in cost among the 10 departments was from $2,429 to $8,935 in 1956 and from $2,222 to $14,857 in 1959.

The county-level cost for the 6 home departments having a Program was $7,909 in 1956. There was a rise in cost in both 1957 and 1958 with 8 counties participating in the former year and 7 in the latter. In 1959 the cost was $14,953 with 6 counties participating. The range among the departments was from $287 to $1874 in 1956, and from $699 to $4313 in 1959.

The county-level cost for the combined departments rose continuously from $57,790 in 1956 to $78,087 in 1959. The range among the 10 counties in 1956 was from $2429 to $8935, and from $2222 to $18,166 in 1959.

The county-level cost of the Program for the agricultural departments in the 10 counties was $222,246 for the 4-year period (1956-1959), for the home demonstration departments in the counties participating was $49,708, and for the combined departments was $271,954 (Table 5).

The preceeding cost estimates do not include state overhead in terms of cost of specialists, supervisors, and administrators. Since additional funds from federal sources were allocated to the work of farm management specialists in the Department of Agricultural Economics and to home management specialists in the Department of Household Economics and Management in the College of Home Economics, it was decided to include an estimate of the cost in-put by these 2 departments. Included with this estimate in the case of home management specialists is one home demonstration agent-at-large who functioned somewhat as a specialist. No estimates of state supervisory or administrative cost are included because no reasonable basis for estimating such costs could be determined. Moreover, whereas staff members were added in the counties and to the staff of management specialists, no additional supervisory (state leaders) or administrative personnel were added.

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[1] Total county-level expenditures (or costs) were met from federal, state, and county funds.

Table 4. Distribution of Counties According to County-level Cost of the Farm and Home Management Program by Departments and by Combined Departments: 1956-1959.

Dollars spent on program	Agricultural department				Home demonstration department				Both departments			
	1956	1957	1958	1959	1956	1957	1958	1959	1956	1957	1958	1959
	Number of counties				Number of counties				Number of counties			
Under $1,000	-	-	-	-	1	4	2	1	-	-	-	-
1,000-1,999	-	-	1	-	5	2	-	1	-	-	1	-
2,000-2,999	1	3	1	2	-	1	4	1	1	1	-	1
3,000-3,999	2	2	2	2	-	1	1	2	-	1	1	3
4,000-4,999	2	1	1	-	-	-	-	1	1	3	1	-
5,000-5,999	4	1	1	2	-	-	-	-	5	1	2	1
6,000-6,999	-	1	-	1	-	-	-	-	-	2	-	1
7,000-7,999	-	-	1	-	-	-	-	-	2	-	2	1
8,000-8,999	1	1	-	-	-	-	-	-	1	-	-	-
9,000-9,999	-	1	2	1	-	-	-	-	-	1	-	-
10,000-10,999	-	-	-	1	-	-	-	-	-	-	-	-
11,000-11,999	-	-	-	-	-	-	-	-	-	-	1	-
12,000-12,999	-	-	-	-	-	-	-	-	-	1	-	-
13,000-13,999	-	-	1	-	-	-	-	-	-	-	1	2
14,000-14,999	-	-	-	1	-	-	-	-	-	-	-	-
15,000-15,999	-	-	-	-	-	-	-	-	-	-	1	-
16,000-16,999	-	-	-	-	-	-	-	-	-	-	-	-
17,000-17,999	-	-	-	-	-	-	-	-	-	-	-	-
18,000-18,999	-	-	-	-	-	-	-	-	-	-	-	1
Total	10	10	10	10	6	8	7	6	10	10	10	10
Total for all counties	$49881	$48664	$60567	$63134	$7909	$11569	$15277	$14953	$57790	$60233	$75844	$78087

Table 5. Distribution of Counties According to County-level Cost of the Farm and Home Management Program by Departments and by Combined Departments for 4-year Period (1956-1959).

	Agricultural department	Home demonstration department	Both departments
Dollars spent on program	Number of counties	Number of counties	Number of counties
None	-	2	-
1 - 2,000	-	2*	-
2,000 - 3,999	-	-	-
4,000 - 5,999	-	1	-
6,000 - 7,999	-	3**	-
8,000 - 9,999	1	1	1
10,000-11,999	1	-	-
12,000-13,999	1	1	-
14,000-15,999	1	-	-
16,000-17,999	-	-	2
18,000-19,999	2	-	2
20,000-21,999	-	-	-
22,000-23,999	-	-	-
24,000-25,999	-	-	1
26,000-27,999	-	-	-
28,000-29,999	-	-	-
30,000-31,999	1	-	1
32,000-33,999	1	-	-
34,000-35,999	1	-	-
36,000-37,999	-	-	-
38,000-39,999	1	-	-
40,000-41,999	-	-	1
42,000-43,999	-	-	-
44,000-45,999	-	-	-
46,000-47,999	-	-	2
Total	10	10	10
Total cost for all counties	$222,246	$49,708	$271,954

* These 2 counties were in home demonstration phase of the Program 2 years each.

**One of these counties was in Program 3 years.

Table 6 summarizes the county cost, farm management specialists' cost, home management specialists' cost, and grand total cost for the 10 counties in terms of totals by departments and years.[1] The grand total cost for the agricultural phase of the Program was $57,898 in 1956 and rose to $74,850 in 1959 and for the home demonstration phase was $14,180 in 1956 and rose to $19,580 in 1959. In 1956 the farm management specialists' cost constituted 13.8 per cent of the grand total cost for the agricultural departments and in 1959 15.7 per cent. The home management specialists' cost was 44.2 per cent of the grand total cost for the home demonstration departments in 1956 and 23.6 per cent in 1959.

When grand total cost for both departments were combined, these amounted to a grand total of $72,078 in 1956 and rose to $94,430 in 1959. In 1956 the specialists' cost was 19.8 per cent of the grand total cost and in 1959, 17.3 per cent. The grand total cost for both departments for the 4-year period was $331,047, with specialists' cost constituting 17.8 per cent of this total.

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[1] The farm management specialists' cost includes professional and secretarial salaries, travel, cost account record summarization and a minor miscellaneous item (mostly supplies). The home management specialists' cost includes professional and secretarial salaries and travel. In view of the small miscellaneous cost (mostly supplies) of the farm management specialists whose participation was much greater than that of the home management specialists, no attempt was made to estimate a miscellaneous item (mostly supplies) for the latter. The farm management specialists' cost was calculated for the total state Program, and then the cost for the 10 counties was determined by applying for each of the 4 years the per cent which the 10 counties was of the total number of counties participating in the Farm and Home Management Program. All counties participating in the Program had a farm management phase. The home management specialists' cost for those counties of the 10 which had a home management phase of the Program were determined by applying for each of the 4 years the per cent which the number of counties having a home management phase was of all counties having such a phase of the Program. The percentages for the 4 years for each group of management specialists are:

Percentage of cost allocated to 10 counties

	1956	1957	1958	1959
Farm mgn. specialists	36	33	33	34
Home mgn. specialists	54	57	54	50

Counties were considered participating in either phase of the Program in a given year if as many as approximately 5 or more days of staff time were devoted to the Program.

Table 6. Summary of Costs of Farm and Home Management Program in the 10 Counties by Department and for Both Departments: 1956-1959.

Type of cost	Agricultural department					Home demonstration department				
	1956	1957	1958	1959	1956 - 1959	1956	1957	1958	1959	1956 - 1959
County cost	$49881	$48664	$60567	$63134	$222246	$7909	$11569	$15277	$14953	$49708
Farm mgn. specialists' cost	8017	6743	10506	11716	36982	-	-	-	-	-
Home mgn. specialists' cost	-	-	-	-	-	6271	5593	5620	4627	22111
Grand total cost	57898	55407	71073	74850	259228	14180	17162	20897	19580	71819

Type of cost	Both departments				
	1956	1957	1958	1959	1956 - 1959
County cost	$57790	$60233	$75844	$78087	$271954
Farm mgn. specialists cost	8017	6743	10506	11716	36982
Home mgn. specialists' cost	6271	5593	5620	4627	22111
Grand total cost	72078	72569	91970	94430	331047

Number of Participants and Length of Participation

Table 7 presents by years from 1954 to 1959, for the 10 counties included in the study, the average number of families participating in the Program and number and per cent of drop-outs.[1] Only one county had participants in 1954. However, in the following year all but one of the counties had participants and in 1956 all 10 counties had participants.

In 1956, the first year all 10 counties had participants, the range among the counties in average number of participants during the year was from 27 to 80.5 with drop-outs during the year ranging from none to 22.9 per cent. In 1957 the average number of participants ranged from 32.5 to 90.5, and the per cent of drop-outs from none to 38.0. In 1958, the average number of participants ranged from 34 to 91 and the per cent of drop-outs from 2.3 to 26.4. In the final year for which data were obtained (1959), the average number of participants ranged from 32.5 to 98.5, and the per cent of drop-outs from 2.5 to 38.3.

In 1956 when all 10 counties had gotten their programs started there were 474 participating families with 7.1 per cent dropping out during the year. The total number of families rose very gradually to 651 in 1959, and during this year the per cent of drop-outs was 16.2.[2]

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[1] It should be noted that accurate information on number of years of participation is difficult to obtain. Since agents' contacts with participants in a program of this type are somewhat limited and even seasonal, it is difficult to decide the exact date a participant may have dropped out. Moreover, no uniform system of recording the names of participants was followed by agents. The records which were developed were the annual listings which a representative of the Office of Extension Studies made with the help of the agents. The final tabulations of participants were done by half year periods so that the calculation of years of participation by each participant resulted in a figure that may be in error as much as a half year in some instances and possibly longer in a few cases.

There is also a slight inaccuracy in number of participating families because of partnerships. Insofar as is known, each partnership is counted as one participant. In some of these cases, however, more than one of the partners participated in the Program.

[2] In 1958 approximately 1639 families were participating in the 30 counties of the state in which the Program was being conducted. (See Frank D. Alexander and James W. Longest, Evaluation Study of Farm and Home Management Program in New York State, Study of the Operations of the Farm and Home Management Program in New York State, Report No. 2, Office of Extension Studies, State Colleges of Agriculture and Home Economics, Cornell University, Ithaca, New York, January, 1959, p. 24.) As shown in Table 7, 621 families in the 10 study counties were participating in the Program in that year.

Table 7. Average Number of Participating Families and Number and Per Cent of Drop-outs by Counties and by Years (1954-1959).

County code no.	1954			1955			1956		
	(1) Average no. of families	Drop-outs		(4) Average no. of families	Drop-outs		(7) Average no. of families	Drop-outs	
		(2) No.	(3) Per cent of col. 1		(5) No.	(6) Per cent of col. 4		(8) No.	(9) Per cent of col. 7
1	-	-	-	26.0	-	-	30.5	7	22.9
2	-	-	-	57.5	-	-	80.5	5	6.2
3	-	-	-	16.0	-	-	38.0	2	5.2
4	-	-	-	41.0	-	-	64.0	6	9.3
5	25	-	-	56.5	1	1.7	71.5	8	11.1
6	-	-	-	3.0	-	-	35.0	-	-
7	-	-	-	-	-	-	45.5	1	2.1
8	-	-	-	21.0	2	9.5	48.5	4	8.2
9	-	-	-	4.5	-	-	33.5	1	2.9
10	-	-	-	1.5	-	-	27.0	-	-
Total & percent of total	25	-	-	227.0	3	11.2	474.0	34	7.1

County code no.	1957			1958			1959		
	(10) Average no. of families	Drop-outs		(13) Average no. of families	Drop-outs		(16) Average no. of families	Drop-outs	
		(11) No.	(12) Per cent of col. 10		(14) No.	(15) Per cent of col. 13		(17) No.	(18) Per cent of col. 16
1	32.5	2	6.1	34.0	9	26.4	32.5	5	15.3
2	89.5	14	15.6	78.0	15	19.2	60.0	2	3.3
3	56.5	6	10.6	56.5	7	12.3	71.5	5	6.9
4	67.0	12	17.9	66.0	5	7.5	98.5	27	27.4
5	90.5	8	8.8	85.5	7	8.1	97.0	15	15.4
6	43.0	6	13.9	43.0	1	2.3	42.0	7	16.6
7	70.0	8	11.4	91.0	14	15.3	80.0	2	2.5
8	50.0	19	38.0	61.0	7	11.4	60.0	23	38.3
9	43.0	8	18.6	43.0	6	13.9	49.5	10	20.2
10	58.0	-	-	63.0	10	15.8	60.0	10	16.6
Total & per cent of total	600	83	13.8	621	81	13.0	651	106	16.2

Another approach to participation in the Program is presented in Table 8,

Table 8. Number and Percentage Distribution of Participants (1954-1959) in the Farm and Home Management Program in 10 Study-counties According to Years of Participation, by Classes, i.e., Continuing, Drop-outs, and Graduates.

Years of participation	Continuing		Drop-outs		Graduates (completed)		Total	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
0.5	28	6	13	4	1	*	42	4
1.0	138	27	84	29	16	6	238	23
1.5	6	1	61	21	4	2	71	7
2.0	102	21	38	13	15	6	155	15
2.5	9	2	50	17	18	7	77	7
3.0	88	18	18	6	17	7	123	11
3.5	13	3	22	7	128	49	163	15
4.0	77	16	6	2	34	13	117	11
4.5	10	2	3	1	14	5	27	3
5.0	22	4	-	-	8	3	30	3
5.5	-	-	-	-	6	2	6	1
6.0	2	*	-	-	1	*	3	*
Total	495**	100	295***	100	262	100	1052	100
Per cent distribution by classes		47		28		25		100
Average	2.4		1.9		3.3		2.5	

* Less than .5 per cent

** This figure is not comparable to the average number of families in 1959 (Table 7). This is true by definition. Attention is called to it, however, to prevent possible misinterpretation.

***This number of drop-outs is slightly less than the total number which would be obtained by adding the total number for each year given in Table 7. This difference results from the fact that drop-outs by years sometimes reentered the Program. It was impossible to include a count of such drop-outs in the above table.

which gives for the 6-year period for all 10 counties a distribution of the number of participants according to years of participation by 3 categories, i.e., continuing in the Program at the end of 1959, dropped out, and graduated (completed). A total of 1052 different families participated in the Program at some time during the 6-year period. Of these 495, or 47 per cent, were still in the Program at the end of 1959; 295, or 28 per cent, had dropped out; and 262, or 25 per cent, had graduated (or completed the work).

The average number of years of participation of those who had graduated or completed was 3.3, but the range was from .5 to 6 years of participation. The average number of years of participation of those who had dropped out was 1.9 with a range from .5 to 4.5 years. Thus in these 10 counties the length of participation of some of the drop-outs is actually longer than that of some of those who were graduates. It should be pointed out, however, that for 4 of the 10 counties, the practice of graduation was never actually followed.

The average number of years of participation of those continuing in the Program at the end of 1959 was 2.4 with a range from .5 to 6 years.

Information was obtained from the agricultural agents on reasons for the participants dropping out of the Program. It should be remembered that these reasons were the agents' interpretation of the situation. The following tabulation lists in order of frequency the classes of reasons given by the agents:

Reason for dropping out of Program	Number
1. No interest, lost interest, became inactive	92
2. Sold farm or dairy or stopped farming	59
3. Either failed to do work called for or to attend meetings	24
4. Family situation changed or adverse	15
5. Gone into nonfarm or part-time nonfarm work	13
6. Moved	12
7. Too much farm work	11
8. Negative attitude regarding some phase of Program	9
9. Illness in family or death of operator	9
10. Limited interest in what program offered	9
11. Program not adapted to operator	6
12. Miscellaneous	4
13. Shifted to some other educational activity	3
14. Changes in operation	3
15. Could not help	3
16. No information	23
Total	295[1]

The class of reasons for dropping out which agents most often attributed to such participants was no interest, loss of interest, became inactive, and the next in order of frequency was sold farm or dairy or stopped farming. No information was obtained as to whether or not the Program had an influence on the decision to sell or stop farming.

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[1] The total of these drop-outs is slightly less than the total number which would be obtained by adding the total number for each year given in Table 6 but is identical with the total in Table 7. The difference between the above total (295) and the total that could be derived from Table 6 results from the fact that drop-outs by years sometimes reentered the Program. Only the reason for a final drop-out is considered in the above tabulation.

Cost of Program Related to Participation: 1956-1959

The 4 years, 1956-1959, are the period which will be considered for relating Program cost to participation. The average per family-year cost of the Program to the agricultural department in the 10 counties in terms of county cost for the 4-year period was $95, with a range from $39 to $156 (Table 9).

Table 9. Cost at County Level of Farm and Home Management Program to the Agricultural Department and to the Combined Departments by Counties with the Number of Family-Years of Participation for the 4-year Period, 1956-1959.

Counties	Total agr. cost at co. level	Per family year cost	Total cost (agr. & HD) co. level	Per family year cost	No. of family years of participation*
1	$14,590	$113	$16,393	$127	129.5
2	19,015	62	25,280	82	308.0
3	34,645	156	46,804	210	222.5
4	39,282	133	47,792	162	295.5
5	33,176	96	40,695	118	344.5
6	12,894	79	19,139	117	163.0
7	30,183	105	30,183	105	286.5
8	11,989	55	17,806	81	219.5
9	18,263	108	19,653	116	169.0
10	8,209	39	8,209	39	208.0
Total	$222,246	$ 95	$271,954	$ 116	2346.0

* Per family year cost obtained by using these figures as divisors.

Since the participation in the home management phase of the Program was completely absent in some counties and conducted irregularly in all but one of the 10 counties, it was felt that no adequate per family-year cost figure could be calculated. However, the agricultural and home demonstration county costs were combined and for this expenditure the average per family-year cost was $116 with a range from $39 to $210.

The estimate of the cost of farm and home management specialists involved in the Program for the 10 counties as a whole could only be obtained by a proportional allocation of total state expenditures for these specialists (see page 13). It was, therefore, thought that any further allocation of this cost on the basis of equal distribution to each of the 10 counties would only add to the possible error arising from the allocation to the 10 counties as a whole. Therefore, the cost figures which combine county-level and specialists' cost are for the 10 counties as a whole. For the 4-year period (1956-1959) the average per family-year cost combining county-level cost of the agricultural departments and the cost of farm management specialists was $110.[1] The average per family-year cost combining agricultural and home demonstration county level costs and farm and home management specialists' costs was $141.[2]

Comparison of County-level Cost of Farm Management Phase of the Farm and Home Program per Participant with County-level Cost of the Regular Extension Program per Commercial Farmer and per Association Member of Agricultural Department[3]

The relationship of the county-level cost of the Program per participant in the 10 study counties as a whole to the county-level cost of the regular Extension program per commercial farmer receiving $2,500 or more from sales of farm products in those counties is presented in Table 10 for 1956 and 1959 which are the beginning and terminal years of the evaluation study. The total dollar cost of the Program in each county for each of these years was calculated by applying to the total county-level expenditure of the agricultural department the percentage which agent staff time in-put for the farm management phase of the Farm and Home Management Program was of all agent staff time in-put. The cost of the farm management phase of the Program thus derived for each county was added up to obtain a cost figure for the 10 counties as a whole. The remainder of each county's total expenditure for the agricultural department was considered the cost of the regular program. These costs for the 10 counties were added together to obtain the regular program cost for the 10 counties as a whole.

In order to obtain a per capita cost figure for the regular program, commercial farmers who received $2,500 or more from sales of farm products in both 1954 and 1959 were chosen as a hypothetical clientele. Justification for this choice rests in part on the fact that it is from among this segment

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[1] This figure was obtained by dividing $259,228 (grand total cost, 1956-1959, for agricultural department - Table 6) by 2346 (number of family years of participation - Table 9).

[2] This figure was obtained by dividing $331,047 (grand total cost, 1956-1959, for both the agricultural and home demonstration departments - Table 6) by 2346 (number of family years of participation - Table 9).

[3] Data available limited this comparative treatment to the county-level costs of the agricultural departments.

Table 10. Comparative County-level Costs of the Farm Management Phase (Agricultural Department) of the Farm and Home Management Program and the Regular Extension Program in the 10 Study Counties: 1956 and 1959.

Items	1956	1959
Regular Program		
County-level cost of regular program of agr. depts.	$255,663	$266,194
Number of commercial farmers	15,533*	13,763**
Per commercial farmer county-level cost of regular program of agr. depts.	16	19
Number of association members of agr. depts.	14,753***	14,161***
Per association member county-level cost of regular program of agr. depts.	17	19
Farm Management Program		
County-level cost of farm management phase of Program-agr. depts.	$ 49,881	$ 63,134
Number of farm management phase of Program participants-agr. depts.	474	651
Per participant county-level cost of farm management phase of Program-agr. depts.	105	97
Comparison of the two programs		
Times greater per participant county-level cost of farm management phase of Program is over per commercial farmer county-level cost of regular program of agr. depts.	6.6	5.1
Times greater participant county-level cost of farm management phase of Program is over per association member county-level cost of regular program of agr. depts.	6.2	5.1

* Although classified under 1956 data, these figures were derived from the 1954 census of agriculture.

**From 1959 census of agriculture.

***From files in Office of Agricultural State Leaders.

of all farmers that most of the participants in the Farm and Home Management Program have come.[1]

When the cost of the regular program for the 10 counties as a whole in 1956 and 1959 is divided by the number of commercial farmers receiving $2,500 or more from the sales of farm products in 1954[2] and 1959, the per capita cost of the regular agricultural department program is $16 in 1956 and $19 in 1959. When the cost of the farm management phase of the Farm and Home Management Program in 1956 and 1959 for the 10 counties as a whole is divided by the total number of Program participants in those years, the per participant cost of the Program is $105 in 1956 and $~~99~~ 97 in 1959.

The per participant cost of the Program in 1956 was 6.6 times as great as the regular agricultural department program cost per commercial farmer with receipts of $2,500 or more from the sales of farm products. In 1959 the per participant cost of the Program was 5.1 times as great as the regular program cost per commercial farmer.

The wide difference in per capita costs for the 2 programs is obvious. It should be emphasized, however, that using commercial farmers with receipts of $2,500 or more from the sales of farm products is a hypothetical approach to figuring per capita cost of the regular program. It provides one method of examining comparative cost. The clientele thus assumed is not the actual clientele (those actually taught and serviced) of the agricultural departments. It is hardly possible that all commercial farmers who have receipts of $2,500 or more from the sales of farm products are in any given year a part of Extension's clientele. Undoubtedly in most counties a number of farmers with less than $2,500 from sale of farm products are in any given year a part of Extension's clientele. Moreover, in all counties there is undoubtedly a growing number of nonfarm people who are actual clients in any given year.

Another approach to comparative county-level costs for the regular program and the farm management phase of the Farm and Home Management Program is to compare the per capita cost of the regular program based on number of association members of the agricultural departments in the 10 counties[1] to the per capita cost of this phase of the Program. The per member cost of the regular program in the 10 counties as a whole was $17 in 1956 and the per participant cost of the farm management phase of the Program was $105 in the same year. Thus the per capita cost of the farm management phase of the Program was 6.2 times that of the regular program. In 1959 the per member cost of the regular program was $19[2] and of the farm management phase of the Program $~~99~~.97 In this year the per capita cost of the farm management phase of the Program was 5.1 times that of the regular program.

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[1] Practically all of 595 participants in the Program in 1956 for whom data were available on gross income for 1955 (or 1953 or 1954) had gross incomes of $2,500 or more. It should be noted, however, that gross income as used for these data includes cash farm receipts, increase in inventory, and income from nonfarm work, whereas U.S. census data used to determine who are commercial farmers is based on sales of farm products (cash farm receipts).

It should also be noted that, in order to use comparable figures for commercial farmers' sales of farm products in both 1954 and 1959, only those operators having receipts of $2,500 or more could be used.

[2] The 1954 agricultural census provides the only data on number of commercial farmers which were close enough in time for use in connection with 1956 cost data used in this study.

No strong defense can be made for using the number of association members of the agricultural departments as the basis for calculating per capita cost of the regular program. These association members can hardly be considered to be identical with the actual clientele of the agricultural departments. However, using this hypothetical clientele makes possible a comparative cost statement. Irrespective of whether for this purpose, the number of commercial farmers receiving $2,500 or more from the sales of farm products is used or the number of association members, the resulting per capita costs of the regular program differ very little.

Relationship of Program Cost to Labor Income Difference Between Participants and Control Group

Since the key income figure which has been used in the Program and hence in reports growing out of the study of the Farm and Home Management Program has been labor income of the farm operator,[3] a statistic derived from labor income data is used here in calculating a cost-benefit ratio for the Program. This statistic is the mean difference of the differences between the 1955 mean labor incomes of 87 participants and of 87 pair matched nonparticipants (control group) and the differences of the 1959 mean labor incomes of the 2 groups.[1] This mean difference of the differences is $436 (Table 11).

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[1] In New York State each agricultural department has a volunteer membership association involving a small membership fee. In both 1956 and 1959 this fee ranged from $2 to $6.

[2] This per capita figure based on membership is identical with that based on commercial farmers having sales of farm products of $2,500 or more.

[3] Labor income of the farm operator is the annual income of the farm firm which is derived as follows: $\left[(\text{cash receipts} + \text{increase in inventory}) - (\text{cash expenses} + \text{unpaid labor cost} + \text{decrease in inventory}) - \text{interest on average capital } \left(\text{with average capital} = \frac{\text{beginning inventory} + \text{end inventory}}{2}\right)\right]$

$\div$ number of operators in the firm.

Table 11. Mean Labor Incomes of Participants and Nonparticipants (Control Group) in 1955 and 1959 With Mean Differences and Net Excess of Participant Over Nonparticipant Labor Income.

1955			1959			Net excess of participant over nonparticipant labor income
Mean labor income		Diff. of means	Mean labor income		Diff. of means	
Participants	Nonparticipants		Participants	Nonparticipants		
$1938	$1774	$164*	$3783	$3183	$600	$436**

* By two-tail test P>.2 but <.3 for t.
**By one-tail test P>.1 but <.15 for t.

Since this figure of $436 is the only available statistic which could be used in calculating a cost-benefit ratio, it is necessary to explain what it is and the limitations under which it is used or can be used. There are 2 basic ways in which the $436 (mean difference of differences) can be obtained. While in obtaining the figure ($436) labor incomes of individual pairs were used, the principle can be demonstrated through the use of means. Thus one way to obtain the statistic is by use of the formula: (1959 mean of participants - 1955 mean of participants) - (1959 mean of nonparticipants - 1955 mean of nonparticipants). The second way is by use of the formula: (1959 mean of participants - 1959 mean of the nonparticipants) - (1955 mean of participants - 1955 mean of nonparticipants). Each formula yields the same difference of the differences. In fact the 2 formulas can be reduced to the same algebraic expression.

The second formula is used here because it provides the basis for a clearer statement of the application of the statistic, $436, to the calculation of a cost-benefit ratio. If the 1959 mean of the nonparticipants, $3,183, is subtracted from the 1959 mean of the participants, $3,783, the difference is $600. If the 1955 mean of the nonparticipants, $1,774, is subtracted from the 1955 mean of the participants, $1,938, the difference is $164. Now by subtracting the $164 from the $600 the difference is $436 which is exactly what would occur if this figure should be obtained through the use of the first formula. Subtracting the $164 takes out of the $600 the difference between the means of the participants and nonparticipants in 1955 which was the year in which benchmark data were obtained for the evaluation study. The $436 may, therefore, be considered the net difference in average labor income in favor of the participants over the nonparticipants for the year 1959. In using the $436 as the favorable difference in labor income of the participants over nonparticipants for calculating a cost-benefit ratio, it should be emphasized that this statistic represents one year, 1959, which is the only year following the study's benchmark year for which data were available. When tested for significance by the t test, the difference of $436 is significant between the .1 and .15 level. This is not a very high level.[1]

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[1] These 87 participants and 87 pair matched nonparticipants provide the data which are used in a forthcoming report dealing with changes in knowledge and practices of participant farm operators attributable to the farm management phase of the Program in New York State. Because the 87 participants which were pair matched with 87 nonparticipants for use in the report do not adequately represent the original random sample of 250 participants studied in the 1956 benchmark survey, data on their labor income changes and on their length of participation cannot be considered as representative but rather indicative of the influence of the Program on all participants.

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[1] It should be pointed out that the level of significance between .1 and .15 for the difference of $436 is not so much higher (that is toward an .05 level) than the level of significance between .2 and .3 for the difference ($164) between the 1955 mean labor incomes of the 2 groups. This level of significance for difference between the labor incomes of the 2 groups in 1955 was accepted as meaning they were matched on labor income. Yet in using the $436 for calculating a cost-benefit ratio, a statistic of difference is being used which is at a level which is not much higher than the level at which the difference between the 1955 labor incomes of the 2 groups were considered nonsignificant. This comparison of levels of significance does not mean that the 1955 labor income difference of the 2 groups and the difference of the differences between their 1955 and 1959 labor incomes are being compared since these are distinctly different variables. The comparison is made to point out that the 2 differences have probability levels for their t's which are not very far apart. This is mentioned to emphasize that using the difference of the differences ($436) to calculate a cost-benefit ratio is using a figure which is at a nonsignificant level ($P > .05$). The probability level of t for the difference of the 1956 means is arrived at by the two-tail test and for net gain in labor income ($436) of the participants over the nonparticipants by the one-tail test. The one-tail test is used in the latter instance since the hypothesis was that the participants would make more progress in labor income than the nonparticipants. (Continued on page 26)

The most appropriate cost figure for calculating a cost-benefit ratio for the 10 study counties is the per family-year cost derived from combining the cost for the agricultural departments and the cost for farm management specialists. This figure of $110[1] is considered the best cost figure to use for 3 reasons. First, by no means were all of the participant families in the 10 counties involved in the home management phase of the Program. Second, whatever influence the Program may have had on labor income change is attributable principally to the farm management phase of the Program. Third, it is practically impossible to estimate a benefit figure for the home management phase of the Program.

Since the benefit figure ($436) for 87 matched participants is used for the calculation of the cost-benefit ratio considered here, the average number of years of Program participation of these 87 participants was chosen as the length of time for obtaining the per family cost of the Program. This figure is 3.9 years.[2] Multiplying the per family-year cost of $110 by 3.9 gives a product of $429. This figure is $7 less than the $436 benefit figure for 1959. The cost-benefit ratio based on these 2 figures ($429 ÷ $436) is .983. This means the cost of the Program for the average length of participation (3.9 years) is 98.3 per cent of the benefit realized in the year 1959. Thus in the one year (1959) for which data are available the average labor income advantage of the 87 participants more than paid for the farm management phase of the Program for the average length (3.9 years) of their participation. It should be emphasized, however, that this cost-benefit relationship based as it is on a benefit figure for one year, 1959, should not be assumed to have been the relationship in any preceeding year or for that matter in any succeeding year. If the favorable labor income differential for the participants in 1959 continues in succeeding years, the cost of the Program will, of course, become less and less significant. While the data suggest this

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The formula used for calculating t was:

$$t = \frac{M_d}{\sqrt{\frac{\Sigma x_d^2}{N(N - 1)}}}$$

where

M_d = mean of the N differences of paired observations (in the case of change the paired observations are themselves differences and therefore the N differences are actually differences of differences).

x_d = deviation of a difference from the mean difference (in the case of change actually mean difference of differences).

[1] This figure of $110 is based on data from Tables 6 and 9. See also pages 19 and 20.

[2] For the 10 study counties the average number of years of participation of the 262 families who had graduated or completed the Program between 1954 and 1959 was 3.3.

possibility, it should be remembered that the probability for the $436 excess favorable to the participants to occur by chance is between 2 1 and 3 1.5 out of 10.[1]

Other cost-benefit ratios may be calculated from available cost data reported in this study, such as, county-level cost for agricultural departments, or total county-level cost for the combined agricultural and home demonstration departments, or grand total cost of the Program which would include county-level cost for both departments plus both farm and home management specialists' costs. If the latter is used, the cost figure is $550 for the average length of participation of 3.9 years, and the cost-benefit ration using the 1959 benefit figure of $436 is 1.26. Thus the cost of the Program for 3.9 years would exceed by 26 per cent the benefits based on 1959 data of 87 participants pair matched with 87 nonparticipants. In view, however, of the considerations listed in the second paragraph preceeding this one, this ratio should be given relatively little weight in evaluating the Program.[2]

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[1] It should also be emphasized that the 1959 benefit figure may not be fair to the influence of the Program since 3.9 years may be too short a period for these influences to be effectively reflected in labor income.

[2] While hardly measurable in dollars, there are certain broad benefits of the Program which deserve mention. The New York State Extension Service has undoubtedly benefited from the Program so that in the future it will be in a position to do a more effective educational job. A large segment of the agricultural agent staff has received basic training in farm management which should enable them to teach and counsel farmers more effectively in this critical area. There are also indications that agricultural agents and their local committees are planning county programs in which farm business analysis is the foundation of the other subject-matter areas. This approach has the potentiality of integrating around sound economic education all other phases of agricultural education as conducted by the Extension Service.

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